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Pathological Transactions of the Chicago Medical Society.

EDITED BY DR. I. N. DANFORTH, ASSISTED BY DR. W. T. BELFIELD.

I.

CASE OF ACUTE HEPATITIS.

BY DR. BELFIELD.

Mrs. P——, 40 years of age, was admitted to the hospital December 20, 1877. She presented no symptoms of local lesion, but appeared to suffer from a general failure of the vital powers which had existed since her last confinement, six weeks previously. She was quite feeble and emaciated; her functions were sluggishly performed, her appetite and sleep were very poor.

No active manifestations of disease occurred until February 6th, when a chill, followed by vomiting, a dull pain in the right hypochondrium, and a high febrile movement announced the advent of an acute affection. Within 48 hours there appeared the usual accompaniments of that adynamic state known as the

"typhoid condition," viz: a dry, brown tongue; a rapid, compressible pulse; a general tremor of the muscles; sordes upon the teeth; great mental prostration, and a dark flush upon the face. Feb. 7th—There was considerable tenderness and tympanites over the whole abdomen. Feb. 8th—Jaundice was observed; the stools were found to be very light in color, while the urine was heavily laden with biliary coloring matter.

Notwithstanding the free use of stimulants the patient rapidly failed; the symptoms especially the jaundice, were much aggravated, and death occurred Feb. 17.

On section the liver was found to be smooth and somewhat enlarged in all its dimensions. From its cut surface there oozed considerable thin, watery blood. There were visible on the external as well as on the cut surfaces of the organ, numerous discolored, yellowish, soft spots varying in size from a pin's head to a pea, many of which, as was evident to the unassisted eye, were perforated by the interlobular veins and veinlets.

Microscopic examination revealed around the interlobular vessels an accumulation of young, indifferent cells, which filled completely the interlobular spaces and, indeed, encroached largely upon the acini themselves; the vessels, also, seemed somewhat compressed. There appeared to be no intercellular substance, except that occasional fibers were observed to traverse the masses of cells in the immediate vicinity of the vessels.

The liver-cells themselves were much swollen, rounded and quite cloudy from the presence of granular matter. Many of the nuclei were obscured by this cloud, while other cells presented each two distinct nuclei and nucleoli. Occasional free nuclei were also observed. The liver cells appeared to be separated from one another by considerable spaces, which contained, however, no other structure than granules.

Differentiation between the proper cells of the lobules and the adventitious cells of the interlobular growth, was rendered easy by the fact that the former were deeply tinged with biliary matter, while the latter were quite destitute of color.

II.

CASE OF INDURATING INFLAMMATION OF LIVER AND ACUTE DESQUAMATIVE NEPHRITIS.

By Dr. Belfield.

H. H——, 72 years old, was admitted to the hospital February 5, 1878. He had enjoyed excellent health, free from any taint, inherited or acquired, until three months previously, when he fell a victim to ague. For five weeks he shook daily, and then obtained relief.

Three weeks later he one day suffered a sharp pain in the right hypochondrium, and became very feverish. In a few days the severity of the pain and fever had somewhat subsided, but he had never regained sufficient strength to leave his bed.

Four days prior to admission he felt a sharp pain again over the liver, and soon his abdomen began to enlarge.

On admission he was well-nourished, his functions well performed; his bowels moved daily, the stools being soft and brown. The abdomen was much distended, partly by liquid and partly by gas; the liver dulness was imperceptible below the seventh rib. There was marked tenderness in the right and left hypochondriac regions. There was some œdema of the lower lobe of the right lung, and slight swelling of the feet. The heart sounds were normal. Pulse 120, temperature 103½.

The urine was of light brown color and low specific gravity, containing about ten per cent. of albumen, numerous small epithelial and granular casts, and much loose renal epithelium.

Feb. 7.—Intense jaundice has been developed.

Feb. 9, 10 and 11, he suffered from constant hiccough, the other symptoms remaining unchanged, except that his pulse and temperature were about normal.

Feb. 13.—He had a chill, followed by headache, fever and vomiting.

Feb. 14.—Another chill, with severe pain across the loins.

Chills occurred daily on the 15th, 16th and 17th. The

general symptoms did not change much, though he was evidently losing strength.

Death occurred Feb. 21. An examination showed considerable transudation into the peritoneal sac as well as into the general connective tissue of the lower extremities.

The spleen was some ten inches long, five inches broad, three and a half inches thick; its consistence was unusually firm.

The kidneys were enlarged, and in their medullary portions at least, hyperæmic. The liver was slightly but uniformly decreased in size, and deeply stained with bile; its surface presented numerous elevations, varying in size from a pin's head to a bean. The tissues generally were deeply tinged with biliary coloring matters.

Microscopic examination of the kidney revealed an excellent example of "cloudy swelling." The granular, swollen, oblong epithelial cells nearly obliterated the calibre of the dilated tubules. The nuclei were generally somewhat indistinct.

The microscopic anatomy of the liver, however, was especially interesting. Here were the evidences of that indurating inflammation which follows long-continued or oft-repeated hyperæmia of the organ. The liver-cells were, on the average, perhaps a little larger than normal, but were highly granular, the granules having in some instances coalesced so as to form fat drops, which lay in and around the cells.

The interlobular spaces were extremely broad, their breadth having been attained, apparently, at the expense of the lobuli, which were correspondingly diminished in diameter.

The interlobular spaces consisted of spindle-cells, fibers and round, indifferent cells. The spindle-cells were usually observed in the central portions, near the portal vessels. Mingled with these, and extending beyond them toward the lobules, were thick straight fibers. Scattered over the entire interlobular space, but collected in great numbers at the margins of the lobules were the small round cells.

These two cases exemplify the first two stages of indurating inflammation of the liver. First as to the liver-cells: The former case showed what Virchow calls a "nutritive irritation,"—an incitation of the cells to appropriate an abnormal amount of nutri-

ment, resulting in the coagulation of certain albuminous constituents of the protoplasm and their appearance as granules. In the latter case reported, these granules had met the inevitable fate of imperfectly-nourished protoplasm and had undergone fatty degeneration, involving, in some instances, the entire cell in their ruin. Second as to the interlobular spaces: In the former case reported, these were filled almost exclusively with small, round, indifferent cells, the products of formative irritation of nuclei as well as of migration from vessels. The few fibers scattered through the mass, however, indicated conclusively that the tendency of these young cells was toward development; that the continuance of the process would have resulted in the formation of connective tissue.

In the second case reported, time had been allowed for the continuance of the process, and there had resulted the formation of the closely-packed spindle-cells, and the long straight fibres which surrounded the vessels. That the developing process had not ceased was proved by the presence, at the margins of the lobules, of myriad small cells capable of a similar development and further encroachment upon the acini. It is interesting to note that the microscopic appearances fulfill the expectations which might be based upon the clinical histories of the respective cases. In that of the woman, the morbid process had not, probably, existed more than ten days, nor was there any history of a previous hyperæmia exceeding physiological limits; hence the morbid appearances were those of a very early stage in the departure from normal action. In the second case, however, there had been daily an active hyperæmia of the liver (perhaps beyond the physiological limit) during the five weeks of his suffering from ague; and there had been, three weeks later, a decidedly pathological engorgement of the organ. Hence it is highly probable that the attack which immediately preceded his admission to the hospital was a mere exacerbation of a process which had begun several weeks previously. The morbid appearances, therefore, were those of an advanced and advancing stage.

III.

CASE OF AMYLOID DEGENERATION OF LIVER, SPLEEN AND KIDNEYS.

By Dr. Belfield.

Jos. K ——, aged 21, was admitted to the medical ward of the hospital, Sept. 28, 1877, and gave the following history.

There was no record of consumption in his family history. He had enjoyed robust health until June, 1874, when he suffered a six weeks' attack of bronchitis. After that time he remained entirely free from a cough until November, 1875, when he took cold again, and from that time was subject to a constant cough, at first dry and hacking, but subsequently accompanied with profuse expectoration, which had been yellow for almost a year prior to admission.

In December, 1876, he sprained himself one day while attempting to lift a very heavy weight. Next day his back was very stiff and sore, and became gradually worse. In March he noticed a lump in the course of the spine. At this time he had severe vomiting and purging for several days, but soon recovered his usual health. He noticed also a progressive emaciation which began about November, 1876.

In January, 1877, he had considerable pain in the right hypochondriac region, occurring at intervals for several weeks. From May to August, 1876, his right leg was much swollen, but neither tender nor painful. There was no œdema in the other leg nor elsewhere.

On admission he was much emaciated; his appetite and sleep were fair; his bowels moved, on the average, six times daily—the stools being of light yellow color; his tongue was clean and moist; his skin cool; pulse 100, rather small but not weak; temperature 98½. There was marked backward curvature of the spine, the most prominent point being the spinous process of the tenth dorsal vertebra. The skin was very translucent, the abdominal and thoracic cutaneous veins appearing quite large.

On examination there was found complete consolidation of the upper lobe of the right lung, except where a small cavity existed just below the clavicle; there was also infiltration at the left apex.

The hepatic dulness began at the fourth interspace and extended two inches below the level of the umbilicus. The free border of the liver, quite hard and rounded, could be traced on this level to the median line; thence the left lobe could be felt extending to the left hypochondriac region, its lower border on a level with the umbilicus. There were numerous tender spots over this hepatic area.

The spleen was not much enlarged vertically. Its anterior limit could not be well determined, owing to the intrusion of the enlarged liver. Its lower border could be felt just below the margin of the ribs.

The patient had been under treatment in the surgical wards for spinal caries during two months previous. On August 1 his urine had been of acid reaction, specific gravity 1013, and had contained five per cent. of albumen. No tube-casts were discovered. On admission to the medical wards (Sept. 28) the urine contained neither albumen nor casts.

His subsequent history was one of gradual decline. In November he had an obstinate diarrhœa; in December, an inflammation of the right knee. In January the urine contained ten per cent. of albumen and numerous hyaline and granular tube-casts. No record was made as to the quantity of urine passed in 24 hours.

Death occurred Feb. 9. An examination revealed a few ounces of clear serum in the peritoneal cavity. The liver was enormously enlarged, occupying a considerable portion of the abdominal cavity; yet this enlargement was symmetrical, so that the general outlines of the organ were not materially altered; its tissue was very smooth, firm, dense and elastic; the edges were thick and rounded. The cut surface was of pale red, waxy appearance—dry, hard and bloodless. The individual lobules were much enlarged and very distinctly outlined by white boundary-lines. A thin section was translucent. The kidneys were large, smooth, pale and firm, the enlargement being due to thicken-

ing of the cortical rather than of the medullary portion. The spleen was but little enlarged, but was firm, dense, and almost bloodless. But a small fragment of the right lung remained, the rest having been disorganized. The left lung presented a large cavity, numerous cheesy masses and many miliary tubercles. There was also extensive caries of the lower dorsal vertebræ. Microscopic sections exhibited admirably the iodine coloration. Entire lobules of the liver, excepting only the margins, presented the mahogany red color. The walls of the interlobular vessels were unusually thick, their calibre diminished. The liver cells were much enlarged, swollen, and rounded; they appeared to have no nuclei. In some instances there seemed to have been coalescence of two or more cells, from the obliteration of the intercellular substance. The cells at the periphery had, in many cases, undergone fatty degeneration. The cortical portion of the kidney was thickened and anæmic. The walls of the vessels were thickened; many of the vasa recta and nearly all of the malpighian bodies exhibited the mahogany-red color on the addition of iodine. The spleen was not much enlarged but was very dense and firm. Many of the malpighian bodies and vessels presented the characteristic color after staining with iodine.

IV.

CASE OF FIBRO-CYSTIC TUMOR OF THE BREAST.

By Prof. P. S. Hayes.

I was consulted Sept. 18, 1877, by Mrs. D., aged 47, who ten years previously had noticed a tumor as large as a pea at the outer side of the left nipple. It had increased in size slowly but continuously ever since, and was at the time of examination much larger than the mammary gland itself. It had never been painful, nor had it caused other discomfort than that produced by its weight; the growth of the tumor had not been retarded by the menopause, which had been passed some years previously. There were also two tumors, one on either side of the neck just above the clavicle. That on the left side had appeared simultaneously

with that in the breast, had gradually enlarged, but had ceased growing several years previously. The pectoral tumor was quite movable, the nipple flattened but not retracted; the skin appeared normal except that in the region of the nipple it was of a bluish tint, due to the presence of dilated capillaries, and was here adherent to the tumor beneath. The breast was firm and elastic and contained circumscribed areas where fluctuation was more or less distinct. There were no enlarged glands in the axilla. The growths were pronounced non-malignant fibro-cystic tumors.

Sept. 20 I removed the largest tumor, making a triangular flap whose apex was at the axilla and base at the sternum. The growth was easily removed, there being no adhesions. The patient made a rapid recovery. The tumor weighed $4\frac{1}{4}$ pounds; was $8\frac{1}{2}$ inches long, 6 inches broad, and 4 thick. It contained numerous cysts, the contents of which varied in color from yellowish-white to reddish-brown, and in consistence from serum to white of egg.

Microscopy.—A thin section of the tumor removed by Dr. Hayes shows the structure of "Adeno-Fibroma." The connective tissue of the interlobular spaces is markedly increased; and this increase is made up of a mixture of round cells, spindle cells, and what may very properly be called nucleated fibers. These three structural elements represent as many stages of differentiation of the same cells; and, so far as the connective tissue is concerned, its abnormality consists in the presence of an undue amount of undeveloped or half-grown cells; in other words, of cells which multiply so rapidly that very many of them never reach maturity. The lobules (acini) are distended with half-grown epithelial cells, and from many of them diverticula or infundibula have developed, these diverticula being also crowded with proliferating epithelial cells. But the two classes of proliferating cells—that is, connective tissue cells and proper gland cells—retain their typical forms. They grow and multiply in accordance with their recognized law of growth. Hence this great mass of distended lobules and connective tissue cannot properly be regarded as a malignant growth. But so nearly is it

allied to the malignant tumors, that if removed, it is more than likely to recur, not as an adenoma, but as a true carcinoma, presenting a veritable atypical cell growth. I. N. D.

V.

CASE OF CARCINOMA OF INTESTINE.

By Dr. Dewey.

A. C., female, 50 years old, married, and of Swedish birth, was admitted to the Illinois Northern Hospital for the Insane April 19, 1875, suffering from secondary dementia, with predominant religious delusions. Although abominably filthy in her habits, she considered her person holy and sacred. Her previous history could not be ascertained.

No marked change in mental or physical condition was observed until February, 1877, when she began to lose flesh, strength and appetite. She seemed to suffer griping pains in the bowels, and usually sat upon the floor, her head bowed, her knees drawn up, her hands clasped tightly across her stomach; yet she never acknowledged any pain.

Feb. 26.—Jaundice was observed. Patient refused to answer questions and violently resisted all attempts at physical examination.

March 16.—Vomiting and constipation had become constant symptoms. The abdomen was everywhere hard and tense; evacuations induced by enemata were of grayish color and very offensive. There were frequent periods of extreme prostration.

March 21.—Patient's actions indicate severe pain in the right hypochondriac region; pulse is rapid and thready.

March 22.—There is pain in the left side, also; her general condition is unimproved; she vomits very offensive greenish fluid.

March 24.—We find a soft, fluctuating tumor 1½ inches in diameter, situated in the median line three inches above the umbilicus. There is general flatness on percussion over the epigastrium, but no distension. Death occurred March 25.

An examination 18 hours later showed the abdominal walls adherent to the transverse colon and to one or two folds of the small intestine on the left of the median line, over an irregular space four or five inches in diameter. The tumor above mentioned protruded between the recti muscles, covered only by the integument and peritoneum. It was of irregularly oval shape, four by six inches in extent, involving the walls of the stomach, transverse colon, small intestines and abdominal coverings.

The stomach was eroded upon its lower internal surface, its walls thickened and adherent to the transverse colon. An irregular, sinuous canal led from one to the other, about two and one-half or three inches in length. The surfaces of the different viscera presented many slight patches of plastic exudation, while numerous flocculi of gray lymph floated in the serum which partly filled the abdominal cavity. The intestines contained much ichorous pus. No enlarged glands nor other deposits were found. A portion of the tumor was sent to Dr. Danforth for microscopic examination.

Microscopy.—The specimen presented, under the microscope, an alveolated network of connective tissue, containing in the interspaces dense groups of atypical cells. Their sections showed the usual cylindriform cell-growth of cancer. The case was one of cancerous infection of the lymphatic vessels and glands.

I. N. D.

VI.

CASE OF ENCEPHALOID CANCER OF KIDNEY.

By Dr. Belfield.

Mrs. B., aged 63, was admitted to the hospital Jan. 23, 1878. Her health had been uniformly excellent until two years previously, when she began to suffer occasional pain, brief but sharp, in the right iliac and lumbar regions. This pain was especially severe when the bladder was full and during the act of micturition. With the lapse of time these pains occurred more frequently; a little blood was occasionally noticed in the urine; and finally a well-defined tumor became apparent just to the right of the umbilicus. Meanwhile her general health declined; she

lost flesh rapidly; her symptoms became gradually aggravated, the pain, size of tumor and quantity of blood in the urine constantly increasing.

On admission, the patient was very feeble and emaciated. The urine contained about 10 per cent. of albumen; large granular tube-casts, and numerous cells widely differing in size and shape—*i. e.*, atypical. A considerable admixture of blood, sometimes clotted, was constantly present. A semi-fluctuating, somewhat movable, globular tumor, painful but not tender, and as large as an infant's head, occupied the right iliac and umbilical regions.

The patient's general health steadily declined; facial erysipelas supervened, and death occurred Feb. 2.

Upon opening the abdominal cavity, the viscera were found displaced, distorted, but matted together by firm adhesions into one chaotic mass. Closer inspection and dissection resolved this mass into a large central tumor, to which were adherent the pyloric end of the stomach, the head of the pancreas, the right lobe of the liver and the gall-bladder; the ascending and transverse colon, and several folds of small intestines. There appeared to be nothing resembling a kidney on the right side. There was no appearance of general peritonitis.

The tumor itself was of oval shape, about nine inches long and six inches in its conjugate diameter. It extended from the lower surface of the liver to the right iliac fossa, lying in contact with the posterior abdominal walls and with the spinal column, its anterior surface being covered by the peritoneum. Beneath the latter membrane was a close interlacement of veins, many of which were as large as a goose quill. The ureter was traced into the central portion of the mass. Many retro-peritoneal and mesenteric glands were much enlarged and quite soft.

Disseminated through the tumor, but especially numerous and large near the surface, were cysts which varied in size from a pea to a walnut, and from which there escaped upon puncture a thin, milky liquid, containing much *débris* of tissue.

Section revealed marked differences in appearance between different portions of the mass. The outer or cortical portion (that part farthest from the ureter) was of light brown color, and had suffered considerable loss of tissue in the formation of cysts. At

the depth of one and a half inches, the color changed abruptly to a dirty white. Both layers of tissue but especially the outer were quite pultaceous, crumbling readily under the finger. There was no gross appearance of renal structure except at the lower extremity of the mass. Here, separated by sharp lines of demarcation from the softened tissues was a mass as large as a walnut of what appeared to be normal kidney.

Microscopy.—A section taken from the cortical portion of the kidney consisted of a mass of cells without any visible intercellular substance, divided into irregular groups by a fibrous framework, or rather permeated here and there by delicate threads of fibrous tissue. The cells varied in size from a blood corpuscle to a bladder epithelial cell, and exhibited the greatest diversity of contour, being circular, oval, polygonal, candate, etc. The nuclei and nucleoli were generally very distinct; many of the cells contained each two nuclei. In most of them the protoplasm was quite granular, sometimes obscuring the nuclei; in some the protoplasm was more or less completely disintegrated, leaving the nuclei nearly or quite free. Almost every field contained a considerable number of oil-drops.

The fibrous tissue of the growth was very scanty and presented no especial features. Sections from the deeper portion of the tumor, and from the enlarged lymphatic glands exhibited essentially the same features, except that the cellular elements were in an advanced state of fatty degeneration.

A section from the small part of apparently healthy kidney showed considerable degeneration. The highly granular condition of all the anatomical elements rendered somewhat difficult the differentiation between malpighian tufts, vessels and tubules. In consequence of this cloudiness the nuclei of the tubular epithelium were quite indistinct; moreover, numerous oil-drops attested the advanced stage of the degenerative process.

VII.

CASE OF CIRRHOSIS OF LIVER AND KIDNEYS.

By C. F. Smolt, M. D.

On Nov. 27, 1877, I was called to visit Hattie S., aged 37. Her health had never been good, though she had not suffered from any definite disease. Her recovery had been slow after each of her confinements (the last of which had occurred May 20, 1877). On June 4, one of her children was attacked with scarlet fever, and subsequently three others developed it. During their illness the patient was their only nurse, and she was then herself confined to bed for four weeks, suffering from a disease whose name she did not know. She remembers simply that she had several chills and a continuous fever. After that time her breathing became more rapid; her skin acquired an ashen hue; she became subject to a short, hacking cough; her strength gradually failed. Nov. 22 she first noticed slight swelling of the feet.

I found the patient weak and emaciated; the pulse was rapid and feeble; there was a mitral regurgitant murmur; dyspnœa, apparently due largely to the distension of the abdomen with gas. The urine contained about 30 per cent. of albumen and numerous epithelial casts. The dropsy gradually extended up to the body. Slight arterial hemorrhages from the lungs occurred Jan. 17th and 21st. Subsequent to the latter date the patient was unable to leave her bed, though compelled to sit upright. Several "sinking spells" occurred during the week preceding death, which occurred Feb. 6.

Post mortem examination revealed a considerable quantity of serous liquid in the left pleural sac; the lower lobe of the right lung was consolidated; the abdomen contained but little liquid. The kidneys were small and dense; the cortical portion diminished in thickness.

Microscopy. — Upon microscopic examination, the tubules were observed to be of variable size, some greatly dilated and

stuffed with epithelium, others contracted and almost empty. Perhaps the most striking feature was the thickness of the connective tissue constituting the capsules of the malpighian bodies and the outer coat of the vessels. The tubular epithelium was highly granular from the presence of fat, which had in many instances gathered into drops, which were visible both within and outside of the cells.

The malpighian tufts were generally much decreased in size, and were surrounded, as were the vessels, by a small-celled infiltrate. W. T. B.

VIII.

CASE OF TUBERCULOUS ULCERATION OF THE INTESTINE.

By Dr. Belfield.

M. B——, a Hollander, 54 years old, was admitted to the hospital March 9, 1878. The lack of a common language prevented the extraction of his previous history. He was quite emaciated and feeble, his appetite and sleep were poor; he was troubled with persistent diarrhœa. We found consolidation of the upper lobe of the right lung, with a small cavity at the apex; also some infiltration at the left apex. There was considerable tenderness and some pain over the abdomen, especially in the right iliac region. He rapidly declined, and died March 19.

An examination showed cheesy consolidation of the upper lobe of the right lung; a small cavity at its apex; a considerable quantity of turbid serum in the peritoneal sac; fatty degeneration of the liver; caseous enlargement of the mesenteric lymph-glands and cheesy degeneration and ulceration of the solitary and agminated glands.

The latter lesions were the objects of especial interest. The enlarged and ulcerated glands were found at intervals of one to four inches along the course of the ileum, most numerous near the ileo-caecal valve. In many instances these glands had suffered not only enlargement but also softening and

disintegration, and there had resulted the oval, transversely-placed ulcers which are so often (and improperly) styled tuberculous. These ulcers varied in size; the largest, which had evidently resulted from the fusion of several smaller ulcers, extended around the greater part of the intestinal mucous circumference.

These ulcers, while primarily scrofulous, were secondarily tuberculous; in other words the absorption of the products of the glandular inflammation had caused inflammatory action at various points along the lymphatic vessels leading from the ulcers to the mesenteric glands. The results of this inflammatory action appeared as gray, miliary nodules (tubercles) which thickly studded the subperitoneal coat of the intestine at the sites of the ulcers, and thence staked out the course of the lymphatic vessel around the intestine and across the mesentery to the mesenteric glands.

This case presents several points of interest: 1—The concurrence of pulmonary and intestinal consumption; in other words, cheesy degeneration of inflammatory products in both air-vesicles and lymph-glands. 2—The association of miliary tubercle with the intestinal but not with the pulmonary consumption. 3—The admirable demonstration of the fact that tubercle "belongs," as Buhl says "to the lymphatic system;" and furthermore that it is developed in lymphatic channels through which there pass irritant substances (proved by the inflamed condition of the mesenteric glands in which the lymphatic channels terminated.)

I take pleasure in announcing that Dr. W. T. Belfield will hereafter assist me in editing the Pathological Transactions of the Chicago Medical Society, and in acknowledging his assistance in reporting matter for the present issue. The present number of the Transactions is almost entirely made up of cases which have been used to illustrate my weekly lectures in the Necropsy Theatre of Cook County Hospital, and have been reported for the Society by Dr. Belfield.

I. N. DANFORTH.

Original Lectures.

PARALYSIS AND CONVULSIONS AS EFFECTS OF DISEASES OF THE BASE OF THE BRAIN.

DELIVERED IN CHICAGO FEBRUARY 21ST, 22D AND 23D, 1878.

BY DR. BROWN-SÉQUARD.

(Reported for the Journal and Examiner.)

SECOND LECTURE.

GENTLEMEN: In the last lecture (the first of this course), I have tried to show that a decussation of the nerve fibers in the base of the brain, although we know it to exist anatomically, is not the least essential for the communication between the brain and the muscles of the body. For the present, continuing the demonstration which I began in the first lecture, I have to speak of the crura cerebri. You remember I told you that a lesion in one-half of the angle in the crura cerebri and medulla oblongata, may take on various symptoms as regards paralysis, or no paralysis at all. I also said that a lesion occupying half the pons varolii either produces no paralysis or produces a great variety of paralysis as regards its extent and seat. The same thing can be said as regards the crura cerebri. A lesion destroying the greater part of the crura cerebri, can produce the greatest variety of symptoms as regards paralysis and convulsions. And, indeed, it is a remarkable fact that any such mass of fibres as those constituting the crura cerebri, forming the only communication between the cerebral lobes, the spinal cord, the pons varolii and the medulla oblongata—that such a mass of fibers, establishing, as I have said, the only communication between the center of will-power and the muscles, can be destroyed almost entirely without

any marked paralysis. I must say that when I first learned this fact I was exceedingly surprised. But since then I have gathered from journals, from books and from my own experience, cases until now I have more than 27 of more or less complete destruction of one of the crura cerebri, without any marked paralysis in the limbs. In all these cases there were symptoms which pretty clearly showed the place of lesion. But as regards paralysis there were none—at least, none were known by the medical men who observed the patients, and the main fact remains that there was nothing of that gross paralysis which we observe frequently arising from some slight lesion in some part of the surface of the brain, the medulla or posterior lobe of the brain. So that we can say that, with the destruction of tissue, which is considerable in that part which is the only channel of communication between the brain and the muscles, there has been very little paralysis, if any; and, indeed, none was noticed in most cases. On the contrary, paralysis has appeared on the side corresponding with that of the lesion. This fact is in opposition with what is admitted. In other cases, paralysis has appeared where it ought to come in all cases, admitting theories we have received to be true.

But in these cases, if you study the facts with care, you find the greatest discrepancies with the same lesion. The paralysis of the two limbs on the opposite side, may be caused by disease of the crura cerebri. Such paralysis may come from only lesion of a very small part of the crura cerebri, leaving most of it perfectly normal. And there you have really too much effect to support the theories which are generally admitted. So that in any way you turn the facts, in almost all cases, you find some figures in opposition to the views admitted. Either there is too much paralysis, or no marked paralysis, or paralysis exists where it should not, in the arm or leg or indefinitely, although the lesion is in the same part in the various cases. Such variety of effect certainly could not exist if the views admitted were true.

I pass now to another argument. One of the most interesting of facts relating to paralysis in brain disease, consists in its coming by attacks, just as convulsions come. There are a number of cases in which paralysis has come and gone—come for an hour, for a day, for two days, and then disappeared altogether,

and then has returned for a certain length of time and disappeared again. In a large number of these cases, I have concluded that the disease was in the crura cerebri, the pons varolii or the medulla oblongata. Now, if you admit that these are the only channels by which the will power can act upon the muscles upon one side of the body, you are in the presence of facts in opposition to your views. How can it be, if these fibers are destroyed, that the paralysis exists only for a few hours, and then disappears? Certainly we cannot admit that paralysis, in these cases, depends upon the destruction of the tissue establishing communication between the brain and the muscles. We must look for another reason in these cases, as well as in many others.

Another argument, of more importance, on which I should like to dwell at length, consists in the fact that in cases of disease occupying the central part of the pons varolii, and destroying the nerve fibers, not only of the center, but of the front part of the two sides of the middle line, it is not rare that instead of paralysis on the two sides of the body, as should exist if the views admitted by almost everybody are true, there is nothing but hemiplegia, that is, paralysis on one side of the body. This argument is certainly most weighty: and, indeed, the cases are not to be doubted as regards the accuracy of the observer and the details, for they come from men in whom we have confidence, and among the writers there are two, certainly, so well known that there cannot be the least doubt as regards their accuracy or their facts — Frederick Charcot and Professor Eugène, of the French Medical School. So that we have facts which show clearly that with a similar lesion on the two sides of an organ like the pons varoli, which is the only way through which fibers coming from the brain go to the muscles, instead of producing paralysis on both sides, produces only paralysis on one side, which is hemiplegia.

After having mentioned these facts, it is quite essential that I should say something which perhaps would have been well placed in the beginning of the last lecture, which is, that the most considerable variety of effects can be observed from similar lesions in the brain of man. It is in that variety of effects that we find the reason explaining why we see in one individual a paralysis on

the same side from a certain lesion, and in another individual paralysis on the opposite side; in a third, paralysis on the two sides, and in a fourth no paralysis at all; and so on, giving the greatest variety not only as regards paralysis, but as regards convulsions. This variety, in effect, indicates, as I conceive, that the cause of that variety depends on the various excitability of different parts of the nervous system. As you well know, the nervous system is a unity in such a way that no action can take place in one part without the whole mass being acted upon in some measure; in the same manner that, while I am only an old man having very little muscular strength, I can shake the whole universe by the movement of my foot. If such a shock, slight as it is, can produce (as no one who knows about the transmission of motion can deny) a shock through the whole universe, can disturb everything in the universe, in a very slight way it may be, in the same way any action in any part of the nervous system produces some effect in every other part, however distant it may be. If so (and I wish I could insist upon the demonstration that it must be so, but I have no time, unfortunately) we must admit that in this case it might be so. In case the excitability of a certain part is greater than that of another, the excitation will find that particular part excitably disturbed far more than other parts, and morbid phenomena will occur in that part. If you observe what takes place when a large mass of people come from a theater or any other large room where the temperature is high, you will find that perhaps 150 will escape without meeting any bad effects from passing from the warm room into the damp, cold air, while perhaps 50 will be affected. Out of the 50 there will hardly be more than a few who will experience exactly the same effect. In all these individuals so affected, however, the same cause will have operated. In some cases cold air on the neck will make itself felt. In others it will exert its effects on the trachea, the bronchial tubes, or the skin. From pretty much the same cause, therefore, there will be a number of individuals who will have trouble with the secretions, or perhaps with the mucous membrane of the throat, or the larynx, the trachea, the bronchial tubes, the lungs, the pleura, the heart, or the pericardium. Others, on the contrary,

will experience the effects of the cold air in the bladder, the kidneys, the stomach, the bowels or liver. Any organ, in fact, in the system, may be acted upon through the same cause in most of these individuals. Even the ear, the brain, or any part of the body liable to be inflamed, may be acted upon by inflammation from such a cause. Well, if we see such variety from causes pretty much the same, we can easily understand that when hemorrhage takes place in the brain, all the various symptoms of paralysis may arise. On this point there are a great many interesting cases that I might bring forward; but there is one published by Dr. Campbell which is most interesting. A boy ten years old was seized with vomiting. Immediately after vomiting he was seized with general convulsions of the muscles of the face, neck and eyes. In a very short time a contraction took place in the blood vessels of the trunk and lower limbs, so that intense cold appeared in these parts. The pupils then contracted, and a very short time afterwards considerably dilated. The pulse became weak and small, and in twelve hours the patient died. As is usual in these cases, there were difficulties of breathing and circulation. What had caused all that? A small hemorrhage—a clot being found no larger than half a walnut, and located in one of the convolutions of the middle lobe on one side. If we were to look upon its action as having taken place according to the theory now admitted, it would have acted upon a series of centers, a center of dilatation and a center for contraction; it would have acted upon a center in communication with the muscles of the body. It would have acted also upon the stomach and other muscles of the abdomen. It would have acted in fact upon any part of the pretended centers; upon the center to arrest the heart's action, or to diminish it. We certainly cannot admit that such a series of centers can exist in a small part of the brain, but must admit the great variety in the excitability of different parts. Irritation starting from a small part of the brain, and finding some parts more excitable than others, will produce diverse effects. In that way we have a key to all these phenomena quite easy to understand.

Then, as you well know, the irritation of taenia may produce convulsions, paralysis, catalepsy, chorea; indeed every symptom

that diseases can produce, when they exist in the brain, may appear through such peripheric irritation; in the same way (as I have tried to show in an article on surgery), a nerve, by traumatic action, can produce the greatest variety of effects—paralysis, convulsions, and so on. So that, as you see, great differences of excitability in certain parts of the nervous system in different individuals, will create a great variety of effects. It is in this way that we can explain the excessive variety that diseases of the brain can produce, although existing in the same part of the brain in the various cases. Experiments consisting in burning with a white-hot iron the surface of the brains of animals, show very clearly how various are the effects of the same cause. In a great many of these animals rendered anæsthetic for a time by the injection of chloral, so as to avoid suffering, cauterization was made without the least pain. In these cases the variety of effects was impossible. In some cases there are phenomena resembling exactly those which we find in man and animals, when there is meningitis of the spine as well as of the spinal cord itself. Thus, in meningo-myelitis these phenomena appear, and appear so as to come on the two sides, while the lesion is only on one side. In one case the animal was shown to my colleague in Paris, who exclaimed, "Why, in the world, do you show us this dog; it is a dog with meningo-myelitis; what is your object?" I said, my object is to show you that there is no such thing whatever. There had been no injury to the spinal cord, and there was only a slight degree of congestion in parts of the cord, and no inflammation whatever; but still all the phenomena of meningo-myelitis existed which had been noticed by inflammation starting from the surface of the brain. In most cases of paralysis the sympathetic nerve on the same side is affected, so that the eye, the face and the ear, exhibit all the phenomena that will appear after the division of a nerve. So you see, we can find by experiment a clear demonstration that the same lesion, such as we can make in animals, will produce the most various effects.

This leads me to return now to the various points which I said I intended to establish in this course of lectures. At first I will speak of the influence that one-half the brain can exert on the body. As you well know, the theories which all have admit-

ted, and most men still admit, imply that the right half of the brain is the organ that moves the left side of the body. I have tried to show, up to this time, and will attempt the complete demonstration in this lecture and the next, that on the contrary one-half the brain may be perfectly sufficient for the functions that belong to the two sides as regards the moving of the muscles of the body. The first argument on which I will again insist as most decisive of all to establish the fact that one-half the brain is sufficient, is that a lesion existing in any part of half the brain may produce no paralysis whatever, or at any rate no marked paralysis. If you take any of the various parts of the brain, the anterior, middle, or posterior lobe, and divide one hemisphere, say at the temporal or occipital lobes, you will produce a lesion without any marked paralysis. Still more, there are cases in which several of these lobes have been destroyed without marked paralysis. And there are a number of cases (not more than four or five however), in which almost the whole extent of one hemisphere has been destroyed without any marked paralysis. One case of that kind was reported by Dr. Abercrombie, and one was published in one of the numbers of last year of my own physiological journal, and one in the Archives of Physiology, published in Paris, the fact having been recorded by a physician of Italy. But these cases are all of less significance than cases in which the disease exists in one-half of the base of the brain without any marked paralysis, for we may say if half the upper part of the brain, or if the lobes that form one hemisphere are destroyed, that the base is able to perform its functions; but when the base is destroyed in one of its parts, so that no communication can exist between one-half of the lobes and the opposite half of the brain, it is certain that such a case is more conclusive than any where the whole hemisphere, excepting the base, has been completely destroyed. If you have taken for granted what I said in the lecture yesterday, you will see that there are a number of cases in which disease may exist in one-half the pons varolii, the medulla oblongata, and the crura cerebri, where there may be destruction of the parts on one side without any marked paralysis. Therefore it is quite evident, if these cases exist (and if I had time I could mention them in detail, but they are soon to be pub-

lished, when you can look at their details), nothing remains but the conclusion that one-half of the brain acts upon either side of the body. It is clear, therefore, that the commonly adopted view is wrong, and that we must admit that one-half the brain is sufficient for the movements of the two sides of the body. It remains, however, to examine why paralysis appears in cases in which there is a lesion, and this point I will try to illustrate in my next lecture.

There are other arguments that establish that half the brain is sufficient for the movements of the two sides of the body. If we find, for instance, that disease in one-half the base of the brain produces paralysis on the corresponding side, unless we admit that some movements are constituted quite distinct from others as regards the anatomical disposition of the tissues, we must admit that this paralysis is due to the ordinary causes of paralysis, according to admitted notions. It is quite certain that what is admitted is, that one side governs the muscles of the opposite side. If so, the fact that disease on one side of the brain may produce paralysis on the corresponding side of the body is clearly in opposition to the admitted theory.

I will pass—as I am compelled to do so for lack of time—from a good many arguments bearing on this point, and come to another point of greater importance, which is that a few fibers may be sufficient to establish a communication between the brain and the muscles in the various parts of the body. When I say a few fibers, I mean relatively a few; I will not say how many, but certainly a very limited number of fibers is sufficient for the transmission of the orders of the will to the muscles. Cases are numerous, in which the base of the brain, particularly the medulla oblongata, has been so pressed upon that a very small number of fibers has remained in these parts able to transmit any order of the will from the brain to the muscles. Take the case like that of the sailor who had been continuing the duties which such men have to perform without any marked diminution of strength, or without rigidity or rapidity of movements, and who died from an acute inflammation elsewhere than in the brain. In this case it was found that the little finger could not pass through the foramen magnum, so that the medulla oblongata must have

been reduced to a small number of fibers, and the parts must have been in a very altered state. Still that man had shown no symptom of paralysis, no symptom of great disturbance of any kind. There are not many such cases; but there are, at least, to my knowledge, three or four. There are a good many cases in which the odontoid process had been displaced, and pressing upon the medulla oblongata, had reduced a great part of its size. In these cases hardly any paralysis had been noticed. There are other cases, such as fracture of the occipital bone, displacing a part of that bone, and squeezing the medulla oblongata so as to reduce it to a small number of fibers. In other cases, as one reported by Dr. John W. Ogle, of London, two tumors, both attached to the foramen magnum, the one on one side and the other on the other, had squeezed the medulla oblongata, and reduced it to a small volume indeed, and without any considerable paralysis. In fact there are many cases, in which either by outside pressure or by disease in that organ, the medulla has been greatly reduced, and no marked paralysis has been observed. In one case, reported by Dr. Abercrombie, the paralysis observed was exceedingly slight, and still Dr. Abercrombie states that an abscess occupied the whole diameter of the medulla oblongata; what the diameter was, unfortunately, he does not say. There was a considerable lesion, but very slight paralysis. It is extremely remarkable that the medulla oblongata, which, as you know, cannot be pricked without death being produced, can, however, in many cases, stand considerable alteration, considerable pressure, without any marked paralysis occurring.

I might say something as regards other parts of the base of the brain; and the argument would certainly derive force from the details of these facts; but unfortunately, for some reason, I have not been able to obtain the details. I hope it will be sufficient for me to state that there are a great many cases of considerable destruction of these various parts of the base of the brain, which extend from the lower part of the medulla oblongata up to a part of the crura cerebri in the two hemispheres, without any marked paralysis, or with paralysis quite inadequate to the lesion that exists. We must therefore draw the conclusion from these facts,

that relatively a few fibers may be quite sufficient to establish communication between the brain and the muscles.

I pass now to consider a point relating to the motor centers of the brain. I said yesterday that I could not admit in the presence of the facts which are in my possession, that there are clusters or agglomerations of cells in certain parts of the brain which are employed in a peculiar function as regards a movement. You know it is now admitted that both in front and behind the fissure of Rolando, there are cells employed in moving the arm on the opposite side. I will not discuss the facts which bear directly against admitting such view. I have already cited a good many facts in opposition to such a view. What I have to do now is to show that view which I consider as correct—that which I proposed, in a lecture in Boston some few years ago. That view consists in admitting that there are cells employed in the same functions scattered all over the brain, so that any part of the brain can be destroyed without any loss of any of the functions of that organ. These cells certainly must be united one with another by fibers; and such union must take place also, even if you have all the cells agglomerated together. There must be communication between them for concert, for harmony in action; so that the same necessity exists in this view of my own as well as in that which I reject. It makes no difference whatever, whether the fibers that establish that communication are only one line or the hundredth part of a line, or two inches in extent, as of necessity any communication is independent of length of fiber for its effects, as Prof. Flourens, of Paris, long ago, established. These facts have been too much neglected lately by experimenters who try to establish the new views concerning the existence of clusters of cells—no doubt of certain limited functions. If you take away the brain by layers, beginning with the front part, you can go until you take away almost all of the two hemispheres without any marked effect upon movements; and still very suddenly you will find paralysis appearing. That paralysis may be complete as soon as it appears, although you may have taken away only a few cells more. If you repeat the experiment, by proceeding from the back part of the brain towards the front, you will have very much the same result. In fact, the question is a

question of quantity of brain-matter, and not a question as to the function existing in one part. The demonstration given long ago by Prof. Flourens ought to have satisfied physiologists. I remember, in my younger days when I began to lecture, I repeated the experiment a great many times and found it correct. Since that time I have seen no reason to change my opinion. What, then, can we say in the presence of such facts? Certainly they demonstrate that the function does not belong to a cluster of cells anywhere, but belongs to cells scattered everywhere, so that any part of the brain can be taken away without loss of function. Pathological facts in man bear out the same thing. When we find the anterior lobes have been destroyed by fracture, taking away a large part of, or by any disease destroying, the tissue, all such cases very different from each other, but all having some vessels either completely destroyed, or taken away, or extremely altered, there was either no paralysis or paralysis inadequate to the lesion. I do not mean to say that there is never paralysis in these cases. On the contrary it exists sometimes; and indeed disease located in some part of the anterior lobes can produce paralysis. But there are a great many cases in which the destruction may involve the two anterior lobes without making paralysis. In the same way, although in a smaller number of cases, destruction of the two middle lobes has been observed without any marked paralysis.

I need not say that it has been observed that destruction of the two posterior lobes has also existed without paralysis. I need not say that no physiologist now feels inclined to admit that the posterior lobes of the brain are employed in any way whatever in movements of the body. But the very view that the posterior lobes are not employed, according to modern physiologists, for moving any part of the body, is in opposition to a number of facts quite different from those I have mentioned, in which a lesion of a small extent in the posterior lobes has produced paralysis; so that degeneration or destruction on the two sides of the brain, of considerable size, may not be followed by paralysis, while a lesion of a small extent in these two parts can produce paralysis. We are entitled, therefore, to look upon paralysis as something different from what it is admitted to be. Indeed, it is shown from the facts we have presented, that there is no part of the brain,

which sometimes being destroyed, has not allowed the persistence of voluntary movement. In the presence of such facts, we must admit that cells employed to move any part of the body are scattered about the brain.

The next point that I wish to establish is with regard to what is called the *clavier theory.* This is the theory according to which communication in a direct way takes place between the brain and muscles. As regards this view, however, the number of facts against it is immense. The theory, at present, has been modified. Originally it was admitted that the fibers which move a given muscle must all be extended like wires to the muscle through the spinal cord and cerebral lobes. It is exactly, in part at least, the very same theory which is now admitted by Terris and other leading physiologists. This theory now is that the pretended centers which are placed in the middle lobe, and in a very limited part of the anterior lobe, are connected by fibers with the corpus striatum, and also by some fibers with the crura cerebri, chiefly in their anterior part, to continue downwards in the pons varolii or in the medulla oblongata, occupying, according to certain physiologists, the anterior pyramids, and according to others, the lateral columns of the medulla oblongata. So that the theory is pretty much the same as it was long ago, excepting that most of these fibers are now recognized to pass from cells, and not to go directly from the brain and muscles without any communication with the cells. It makes no difference whether there are cells or not. The same arguments, brought long ago against the *clavier* theory, are good against the new one. It is impossible to admit the view by reason of the facts already presented. I need not repeat them. We find the two crura cerebri destroyed in the anterior part without marked paralysis; we find the two corpora striata almost completely destroyed without marked paralysis. According to the *clavier* theory, when the will wishes to produce a certain movement, it has but to strike a key, which acts upon certain fibers, producing movement. No such thing certainly exists. When we see the medulla oblongata so reduced that only about one-fifth remains, such cases certainly leave no doubt that such transmission of nerve currents between the brain and the muscles does not exist. It is certain that we

must admit that a few fibers are sufficient; and if so, it leads to the necessity of admitting something else than mere nerve current.

We find not only from these facts, but from disease of the spinal cord, that a something like a message must be sent through the few wires that remain in cases of considerable lesion in the brain and spinal cord in voluntary movements. Through these few fibers the will can transmit a message; but there is no possibility, that I can see, of understanding that these few fibers may be sufficient to transmit direct action to the muscles. You know our voluntary movements are not voluntary all the time—that if we wish to walk from here to a place ten feet in front of us, we give the order in a clear way, as otherwise our movements will not be executed just as we wish. We must unconsciously give the end to be reached. We do not give any other order but mention the end, and when the machinery has been set at work the movements will continue. The power of will in these cases is exceedingly limited. The power of the will consists only in giving the order to reach the end. The execution is performed by the parts located in the spinal cord, from the nerves which come from the base of the brain, and are located in the *medulla oblongata.*

If we understood that it is only an order which is given to reach an end, or to execute a certain thing, there is no need of a great number of fibers. The order is not given by a constant transmission of a current all the time. The order we give once for all, and if we try to interfere with the movements of our limbs which we are working, we do not execute the movement well. In every movement that we execute, either with the fingers, when we play the piano, or any movement of any kind executing anything that requires exactitude in movement and also in reaching an end—in all these cases if we interfere we become clumsy. If we look at our legs when we walk, if we try to ameliorate our steps, we become extremely clumsy and do not walk as well as when we do not pay attention at all to the order to move. So it is when we want to shoot with a gun. If we pay attention to the movements of the fingers, and if we do not pay attention only to the end, we are sure to miss the object. So that the

great point is to understand the end clearly, and let the mechanism execute what is to be done to reach that end. If so, when we move, when we execute a series of movements, it is not a series of nerve currents coming from the brain to the muscles which takes place. An order given implies a message sent. But if communication can take place between cells; if cells are able to understand a message; if cells are endowed with power similar to the power in the brain in the act of thinking, it is quite easy to understand that a few fibers are perfectly sufficient. But if we do not admit that it is from a message that we have an order to the muscles, I am at a loss to understand how a few fibers will be sufficient for the transmission of the orders of the will to the muscles.

To-morrow I intend to examine at length the diagnosis of paralysis and convulsions in the various parts of the base of the brain, and come also to that most important part of this course of lectures, although it will be rather a short one—that is, the therapeutics of the nervous system, as we can ground it now on the new theories I have tried to bring forward.

EVIDENCES OF MEDICAL ACTIVITY IN THE UNITED STATES FOUND IN FOREIGN JOURNALS.—Time was when medical authors and medical treatises of American origin were greeted on the other side of the water with contemptuous disdain. It is curious to note the constantly increasing change in this particular. For example, the latest issue of the venerable and conservative *Edinburgh Medical Journal* contains an original communication from an American author; five of its ten book reviews relate to American publications, all favorably criticized; and in the Periscope, which embraces 16 items there are nine credited to American Medical journals.

CLAUDE BERNARD the great physiologist, died at Paris, on February 11th.

Original Communications.

THE RELATION OF AMETROPIA TO BLEPHARITIS CILIARIS.

By F. C. Hotz, M. D.

In a great many cases of blepharitis ciliaris* which present themselves for treatment, the disease has persisted for a period of several months, if not years. Perhaps the patient has never had any treatment for his lid trouble and thus its persistence is not to be wondered at. But often we are informed that the patient has been under the care of experienced oculists; that the lids improved and seemed to get well; but that sooner or later the inflammation recurred. Such patients of course, become rather discouraged by this experience and physicians who have occasion to observe their frequent relapses are misled into the belief that blepharitis is a very intractable disease. And yet it is far from being so. Its obstinacy is more apparent than real, and can, I think, be easily accounted for. We must only remember that the patient does not consider the disease dangerous because it does not directly impair his sight; that it is the unsightly appearance of the ulcerations and crusts upon his lids for which he seeks medical advice. By a few local applications these ulcers are so nearly healed that the edges of the lids do not become crusted over any longer. The defacement is removed, although the disease is not eradicated. But as the patient was concerned only about the disfigurement, he abandons treatment as soon as the cause of his anxiety is removed, and before a thorough cure can be accom-

* This term is now commonly used to designate the eczematous inflammation which shows itself along the edges of the eyelids and involves the follicles of the eyelashes (cilia). It is also called ophthalmia tarsi.

plished. The lids remain in a morbid state, and the most insignificant irritation suffices to rekindle the inflammation. This is not likely to occur if the treatment is properly continued until the lids do not show any infiltration or congestion or desquamation. But these are exceptional cases, and therefore a permanent cure of blepharitis is seldom recorded.

This explanation is not invalidated by the fact that many patients have used one or another remedy for blepharitis many months without any lasting benefit. I lay great stress upon this one point: that the surgeon himself must attend to the treatment, if it is to be efficient. For I have been convinced by numerous observations that to leave the local treatment of the lids to the patient or, if it is a child, to the parents, amounts to little or no treatment. Parents are too kind-hearted to insist upon thoroughly cleansing the crusted lids when at their first attempt the little darling begins to scream; and they are too timid to apply the ointment to the very edge of the lid. The remedy is either rubbed upon the crusts or smeared all over the cutaneous surface of the lid except its edge. And in either case it will be of just as much benefit as if it had not been used at all.

Under these circumstances it would be surprising, indeed, if a relapse of the disease were less frequent when the affected tissues have neither recovered their sound molecular structure nor resumed their normal functions. The untimely interruption, and the insufficient mode of the treatment, therefore, seem to me to fully explain, in the majority of cases of blepharitis, the unsatisfactory results so commonly obtained in private and hospital practice. And I do not think it is necessary to look beyond these very plain causes and attribute to the refraction of the eye any great influence upon the development of blepharitis ciliaris. This view of a direct relation between refraction and tarsal inflammation was first entertained by Dr. D. B. St. John Roosa, of New York. Before the International Ophthalmological Congress, held in New York, September, 1876, he undertook to show that "ametropia (anomalous refraction) seems to be the condition of most eyes affected with blepharitis ciliaris;" that "hypermetropia is the error of refraction most frequently associated with blepharitis ciliaris;" and that "when blepharitis is

associated with errors of refraction, the cure of the edge of the lids is very much facilitated by, and sometimes depends upon, the correction of the ametropia." *

In support of these views Roosa presented a statistical report of 31 cases of blepharitis, of which 26, or $83\frac{9}{10}$ per cent., had refractive errors (13 hypermetropia, 5 myopia, 8 astigmatism) and only 5, or $16\frac{1}{10}$ per cent., had emmetropic eyes.

Dr. P. D. Keyser, of Philadelphia, confirmed Roosa's views by a report † of 31 cases, of which 25 had hypermetropic eyes, and 6 were astigmatic. But while Roosa is inclined to believe that ametropia only predisposes to the outbreak and favors the continuance or relapse of the lid trouble, Keyser goes a step further, and thinks that "accumulations of experience may show the fact of ametropia being in many, if not all cases, the direct cause of blepharitis." ‡

On the other hand, Dr. Ad. Alt, resident surgeon of the New York Ophthalmic and Aural Institute, says § :

"Since Dr. D. B. St. John Roosa, at the meeting of the international ophthalmological congress, held in New York in September, 1876, has advanced the idea that blepharitis ciliaris was, in about 83 per cent. of the cases, connected with ametropia, and holds ametropia a frequent cause of conjunctivitis and blepharitis, 48 patients have been especially examined with regard to that statement; 39 of them had emmetropia, 5 myopia, 3 hyperopia, 1 astigmatism — certainly no striking prevalence of ametropia."

My own observations during the past year extended over 18 cases, in private practice, of idiopathic || blepharitis, of which only 5 or 33 per cent. showed ametropia (4 hypermetropia, one myopia and one astigmatismus). The state of refraction was

* "The relations of Blepharitis ciliaris to Ametropia," in the report of the fifth International Ophthalmological Congress; also published in the *Amer. Journ. Med. Sciences*, January, 1877.

† "On some forms of inflammatory diseases of the eye being caused by defects of the refraction and accommodation," in the *Transactions of the Med. Soc. of the State of Pennsylvania*, 1877.

‡ *Phila. Med. Times*, 1877, p. 268.

§ "Clinical Report of 3,873 Eye-patients treated at the New York Ophthalmic and Aural Institute during the year 1876," in Archives of Ophthalm. and Otol., vol. vi., p. 180.

|| *I. e.*, not complicated by (or the sequelæ of) other inflammatory affections of the eye.

carefully ascertained by means of the ophthalmoscope, without, however, the previous use of atropia, which Keyser employed in all, and Roosa in the majority of cases. Though the accommodation becomes pretty well relaxed in the dark room, and although I had frequent opportunity for testing the reliability of my ophthalmoscopic measurement afterwards, when the eyes had been atropinized, and found it confirmed by the other tests—I admit that the influence of the ciliary muscle is not as completely suspended in the dark room as by the paralysing action of atropia; and I concede that, had I employed the atropia, some of my cases might have shown a slight degree of hypermetropia, and consequently increased the percentage of ametropia.

I am quite willing to make this concession; for I hope I shall be able to prove that the mere statistical fact that ametropia prevails among blepharitic patients, cannot be accepted as conclusive evidence of any etiological connection between the two affections. I think I can show that such deductions are as fallacious as the argument of *post hoc ergo propter hoc*, which in therapeutics has so often led to deception and disappointment.

In the first place, the high percentage of ametropia Dr. Roosa has found among his blepharitic cases, is nothing very extraordinary, since the examination of thousands of *atropinized* eyes has shown that ametropia is the rule and emmetropia the exception in the refractive state. F. Erisman,* of St. Petersburg, examining the refraction of the atropinized eyes of 4,358 pupils, aged from 6 to 20 years, found 30.2 per cent. myopia, 43.3 per cent. hypermetropia, 26 per cent. emmetropia and 0.5 per cent. amblyopia. In other words, 73.5 per cent. ametropia, against only 26 per cent. emmetropia; a result which comes pretty near the statistics of Dr. Roosa.

Those who believe in the causal relation between ametropia and blepharitis, refer, in advocating their views, to the well-known fact that the continued use of the eyes for near work (as reading, writing, sewing) often occasions a hyperæmia of the conjunctiva and the edges of the lids. This hyperæmia—they continue to reason—becomes chronic, produces an alteration of

* Graefe's Archiv. f. Ophthalmol., xvii., 1, p. 8.

the nutrition, and finally leads to an inflammation of the tissues involved. Says Keyser*:

"That ametropia of any kind or form causes in all acts of vision a strain more or less upon the eye, which creates a hyperæmic condition of the neighboring parts, is a well-known fact, as may be seen in many cases by red and congested conjunctiva and edges of the lids after use at close work or reading. In cases where the strain is so great as to create a continued hyperæmia of the edges of the lids, the extremely fine ducts and external openings of the small sebaceous glands that are to be found in the canals and follicles of the cilia, become closed by pressure from the swelling of the tissue and vessels surrounding them, and having no outlet for the natural secretions, which are now increased by the hyperæmic condition, a choked status results, and inflammation and suppuration take place, as may be noticed by the little pus beads that are found encircling the cilia and extending down the canal to the gland."

According to this view a great strain of ametropic eyes, during the act of near vision, is the primary condition which ultimately leads to the inflammation of the lids.

Now, in the first place, this accommodative strain does not take place in nearsighted eyes, unless they are armed with unsuitable glasses. We know that myopic persons can read or write almost day and night without feeling the least fatigue in their eyes, because their far point of vision is so near the eye that they have to make little or no effort at accommodating their focus for the short distance at which they wish to read or write. A person, for instance, with myopia 1-14 does not make the least accommodative effort while reading books printed in the usual types at the distance of twelve to sixteen inches, because if the accommodation of these eyes is completely relaxed, the farthest point of distinct vision is at 14 inches in front of these eyes; therefore if their eyes are perfectly at rest they can see distinctly at short distances to accommodate for which the normal (emmetropic) eye has to make a considerable effort. This exertion, if continued for hours, must necessarily exhaust

* Transactions of the Med. Soc. State of Pennsylvania, 1877, p. 536.

the muscular force of the emmetropic eye, and produce the sensation of fatigue; while the nearsighted eye does not get tired, and on this account is often erroneously taken for a "strong" eye.

In view of these facts it is impossible to recognize in myopia a source from which through a continued strain of accommodation and consequent hyperæmia of the lids, the tarsal inflammation could derive its origin.

It is a different thing with hypermetropic eyes. Hypermetropia, if not corrected by convex glasses, is the source of a continual strain upon the eyes. The accommodation of farsighted eyes is never relaxed except during sleep, because they must make more or less effort at accommodation even when they look at distant objects, in order to overcome the refractive error, and to gain a well-defined, focalized impression upon the retina. This same effort to correct the anomalous refraction, must be made during reading or writing, in addition to the amount of accommodative action which is required to change the focus from distant to near vision. It is evident, therefore, that hypermetropes use their eyes for near work under very unfavorable conditions; the abnormal strain upon the accommodative function must sooner or later exhaust the power of the ciliary muscle; the eyes become tired, heated, red and painful; the vision is obscured, and the patient is obliged to interrupt his work. People generally call such eyes "weak," and oculists use the technical term "asthenopia," to designate in one word all these symptoms due to the overwork of accommodation.

As long as hypermetropic eyes are not employed much for near work, and if there is but a slight degree of hypermetropia, the person will not be troubled by asthenopia, because the strain upon the accommodation is not sufficient to produce it. The presence or absence of asthenopia, therefore, gives us a pretty sure indication as to whether or not there is any great strain upon the eyes. And where this strain is not sufficient to give rise to asthenopic trouble, it is certainly not great enough to affect such distant parts as the eyelids, so intensely as to produce blepharitis.

Roosa found hypermetropia 1-48 to 1-30 in nine cases, and

hypermetropia 1-24 to 1-8 in four cases; Keyser reported hypermetropia 1-48 to 1-30 in twenty cases, and hypermetropia 1-24 to 1-5 in 5 cases. This preponderance of the slight degrees of hypermetropia, which so seldom give occasion for asthenopic trouble, militates strongly against the idea that they should play an important rôle in the development of the lid trouble. If we actually admit that these slight degrees of hypermetropia can have so far-reaching an influence upon the lids, we shall find it very difficult to account for the fact that blepharitis is so seldom observed in the large number of hypermetropes who consult us on account of asthenopia, and whose eyes decidedly labor under a great, continued strain. I have always observed the rule to record any visible morbid condition of conjunctiva, lids, etc., in patients who consulted me on account of refractive anomalies. In examining such eyes I could not fail to detect even a slight degree of blepharitis. And yet, looking over my memoranda for the past years, I find only 4 cases of blepharitis among 267 cases of anomalous refraction. In all these cases the error of refraction was so marked that it impaired the function of the eyes, and in the most of the hypermetropic and astigmatic eyes produced more or less asthenopia; and nevertheless the nutrition of the edges of the eyelids was not disturbed except in four cases. While on the other hand, where the edges of the lids were inflamed, the anomaly of refraction was as a rule so insignificant that under ordinary circumstances it did not give any inconvenience to the patient, and it required artificial means to establish its presence.

As especially conclusive evidence of the causal relation between hypermetropia and blepharitis, Keyser referred to one case, with these words: "Also in the case of June 5, 1876, the hypermetropia was, without doubt, the cause of the blepharitis; as the lids of only one eye were affected, and this was the hypermetropic one, while the other was normal and no defect of refraction could be found." *

But this case is not so positive a proof of any direct connection between the two affections as it seems at first sight. In fact, it

* Transactions of Medical Society of State of Pennsylvania, 1877, p. 536.

becomes a very doubtful argument as soon as we know that blepharitis may be limited to one eye also under altogether different circumstances, as the following case may illustrate:

On October 3, 1876, I was consulted by the parents of Felix M ——, aged 9 years, because they believed him to have become near-sighted. They remarked that when reading he would bring the book very close to the eye, and could read but a short time. Each eye showed V = $\frac{20}{20}$ which was deteriorated by even the weakest convex glasses. But he could read large print (Jaeger 7) only, and had to hold the book as near as six inches to the eye. The ophthalmoscope detected H. 1-16; otherwise the fundus was normal. He was given convex 24 and after having these glasses on 10 minutes, he could read smaller print (Jaeger 3) and at a greater distance than he could without glasses. The right upper lid was covered with crusts produced by extensive ulcerative blepharitis, while the other lids did not show any defect.

In this case the blepharitis was confined to one lid, but, unfortunately for Keyser's theory, both eyes showed the same degree of H. and the same amount of accommodative strain.

There is another fact which does not well agree with the view that the strain caused by ametropia is the principal cause of blepharitis. I refer to the fact that this disease is most frequently met with in children; and if it is observed in older persons, they can generally date the first outbreak back to childhood. As a rule we can say the disease is developed at a time of life when the acts of vision do not demand any continued efforts of the eyes. My experience is that the greatest number of blepharitic patients is observed among children under five years of age. And I was surprised by finding that neither Roosa's nor Keyser's list contains a single patient under five years and that both tables include very few patients between five and ten years. Can they really not have observed any such cases, or did they omit them because the tests of vision cannot be employed in so young children? As my experience is greatly at variance with their statements, I will give here a statistical résumé from my private and hospital records.

In private practice I observed during the four years, 1874 to

1878, 73 cases of blepharitis ciliaris. According to the age they can be classified as follows:

Under 5 years..... 27 cases, or 37 per cent.
Between 5 and 15 years..... 22 " " 30 "
Between 15 and 20 years..... 14 " " 19 "
Over 20 years ..... 10 " " 14 "

The record book of the Illinois Charitable Eye and Ear Infirmary gives this information:

Total number of cases of blepharitis during 1876...34.
Under 5 years..... 16 or 47 per cent
Between 5 and 15 years..... 11 or 32.3 "
Between 15 and 20..... 2 or 6.0 "
Over 20..... 5 or 14.7 "
Total number of cases of blepharitis during 1877..... 55.
Under 5 years ..... 19 or 34.5 per cent.
Between 5 and 15 years..... 21 or 38.2 "
Between 15 and 20 years..... 9 or 16.3 "
Over 20 years..... 6 or 11.0 "

The hospital and private records agree in proving the prevalence of blepharitis among children, and a careful inquiry into all the circumstances associated with the beginning of the disease would, in most cases, discover other and more potent causes than ametropia.

In a few instances it has been mentioned that the edges of the lids which had been treated unsuccessfully for years, got well without much treatment as soon as the refractive error was corrected by suitable glasses. These observations fully coincide with the experience so often gained in cases of conjunctivitis, that they prove to be rather obstinate to the usual topical treatment, but are speedily cured as soon as any anomaly of refraction has been corrected. In either case the rapid improvement in the condition of the lids must be attributed to the correction of the ametropia; there is no doubt of that. But this improvement takes place, not because by correcting the refraction we remove the original cause of the disease, but because we abolish thereby a condition which is apt to aggravate and prolongate an existing inflammation of the conjunctiva or lids. Just as the least amount of smoke in the air, which does not make any

palpable impression upon a healthy conjunctiva, markedly irritates an already inflamed conjunctiva, so does the abnormal effort hypermetropic and astigmatic eyes have to exert in near vision, more strongly affect the eyes of the lids in the inflamed than in the healthy state. While any congestion produced in healthy eyelids will pass off without consequences, it will increase the inflammation and retard the recovery of inflamed lids. And this, I think, is the real relation of ametropia to blepharitis ciliaris; the affection of the lids may sometimes be rendered very obstinate through the adverse influence of hypermetropia or astigmatismus. We must look upon ametropia as a complication of blepharitis; and whenever the affection of the lids, especially in adults, does not readily yield to a proper treatment, we may find a certain degree of ametropia to be the cause of the obstinacy of the disease. If this is the case we should of course remove this, like any other complication, in order to put the lids in the most favorable condition for recovery.

A NEW APPARATUS FOR POTT'S DISEASE OF THE CERVICAL VERTEBRÆ.

By Wallace Blanchard, M. D., Chicago.

The inadequacy, inconvenience and unsightliness of the instruments constructed for Pott's disease of the cervical vertebræ, have led me to devise an apparatus that for efficiency has far exceeded my expectations.

In this disease the carious body of the bone gives way, and the transverse spinous processes, from their posterior position, tip the head forward, till, as the disease advances, the chin may rest upon the chest. Any force that carries the head backward causes the transverse processes, which are seldom diseased, to serve as the fulcra for removing the pressure from the diseased body of the vertebræ; the density of their structure rendering them equal to the support of any reasonable weight.

While Dr. Sayre teaches this principle, he neglects its applica-

tion in his apparatus for cervical Pott's disease, which he calls the "jury-mast;" the only act accomplished by it being the lifting directly upward of the head. It is uncleanly and disagreeable to wear, consisting as it does of "four or five layers" of plaster of Paris and crinoline, and a "mast," with a swing for the head, which attracts attention nearly as far as its wearer can be seen; matters of no small moment when peace of mind and out-door exercise are often considered a part of the treatment.

The apparatus which I shall describe obviates the disadvantages named, if the rules which I shall give for its make and application are observed.* Take a plaster-of-Paris mold of the back, and from that a plaster cast, quite thick and strong. Soak a piece of "skirting" (a form of saddler's leather dressed with oil and very stiff) in water for a day, and then bind it firmly and closely to the cast, using thirty to forty feet of small sized rope for the purpose.

When dry, this leather must of course present an exact contour of the back. Have steel strips riveted to this leather splint in such a way as will support it best, line the inner surface with chamois skin, and to each side sew an apron of light, pliable leather in such a manner that it may be laced over the abdomen.

Support a pad for the occiput on an arch formed by the joining of two steel strips that pass down over the back splint, and are there secured in such a manner as to be raised or lowered to any desired position, and there held by set-screws. Upward and backward from the occipital pad for three or four inches, extend a single strip of steel supporting two buckles, supplied with a band to pass around the head. Place the splint in its position on the back, with a light linen or cotton shirt next to the body, and lace the apron over the abdomen as tightly as can be borne with comfort by the patient. Add straps over each shoulder, only tight enough to steady the splint, and be sure that the splint extends high enough over the shoulders so that there shall be no

* I have been somewhat explicit in this article for the reason that it is too much the habit of certain gentlemen in large cities (not particularly in Chicago) to publish a treatment or describe an apparatus full enough to show its usefulness, and to just stop short of those details that would enable the average reader to make any practical use of the information given. The result is obvious. The doctors "in the provinces" send in their cases. I fail to see the practical difference between this and taking out a patent in the (ir)regular way.

downward pressure. The accuracy with which it fits every inequality of the back makes it quite immovable.

The occipital pad should now be in such a position that considerable force shall be required in lifting and carrying backward the head so as to place the occiput on the pad with the chin somewhat elevated; then buckle the strap over the forehead and the apparatus is applied as represented in the cut.

Fig. 1, occipital pad, serving as a fulcrum on which to raise the head. Fig. 2, slots and set-screws by means of which the occipital pad is set at the required position. Fig. 3, apron, laced in front.

The head is now firmly supported, and in such a manner that if there should be any excess of weight not carried by the instrument, it is taken *entirely by the transverse processes.*

I first applied this apparatus to a girl of five years, from the southern part of the State. On my first visit I found her sitting on the bed, supporting her head with her hands, and was told that this had been for several weeks her almost constant position. There was considerable projection of the spine of the fourth cervical vertebra; she was pale and emaciated; exhibited nervous symptoms, and complained constantly of pain in the neck and throughout the thorax. On the application of the apparatus she was almost immediately relieved from pain. A mild nutritive tonic treatment was added, and she progressed so rapidly that at the end of a month I felt safe in letting her return home. A little over a year after, word was conveyed to me that the family physician considered her cured, and had discontinued the use of the instrument.

My second case, a boy of seven years, from Iowa, with symptoms and deformity not so marked, under the use of the apparatus, improved, and recovered in quite the same manner as the first.

The third, a boy of ten years, from Minnesota, was a case confided to the care of Dr. E. Bert, of this city, who called me in consultation with the intention of giving my apparatus a trial. The boy had a slight projection of the spines of the last cervical and first dorsal vertebræ, with considerable pain and nervous asthenia. A month after the apparatus was applied, he had so far improved that we considered it safe to let him return home. With his coat and cap on, this boy passed along the street without attracting the least attention to the fact that he was wearing a mechanical appliance.

In rotary-lateral curvatures, and advanced Pott's disease, below the level of the axillæ, Dr. Bryan's plaster-jacket applied during suspension, according to the method of Dr. Sayre, is undoubtedly the most efficient treatment yet devised. But in Pott's disease, in the lower half of the column, when the curvature is direct and not very marked, I prefer, after extension, to apply a steel supported leather back splint, as described, for the base of the apparatus for cervical Pott's disease, cutting a fenestrum of size

sufficient to obviate pressure at the point of disease, and padding the shoulder straps which are to be buckled tightly over the shoulders. The patient can in this way be held in a nearly or quite perfect position, with immobility secured, and all the weight transferred from the bodies of the diseased vertebræ to their transverse processes.

I have found this treatment very successful in appropriate cases. The back splint used in this manner, originated, I believe, with the late Dr. J. S. Sherman, of this city, though Dr. Adams, of London, described a somewhat similar support at about the same time that this was introduced. The idea of wearing the immovable plaster-jacket for from two to four months at a time, as advocated by Dr. Sayre, is naturally repugnant to persons of ordinary cleanliness, and is to be avoided when any substitute that is just as effectual can be found.

Dr. Edmund Andrews tells me that his chief concern while using the jury-mast apparatus on young patients, has been their liability to slip the straps that pass under the jaw, so as to produce strangulation.

Mr. Chas. Degenhardt, surgical instrument maker, has done the steel work on my Pott's disease apparatus in a very creditable manner, but in a country town any skilled mechanic could do the work properly, if not so neatly, under the supervision of a surgeon having in view the results to be obtained.

More general attention should certainly be directed to this form of disease, considering its frequency, the large percentage of mortality, and the unsightly deformations so often left to the survivors.

TRACHEOTOMY.

By F. H. Blackman, M. D., of Geneva.

(*A Paper read before the Fox River Valley Medical Association, July 2, 1877.*)

Case 1.—C. P., aged four years, health always good. I saw him first on the evening of Jan. 29, 1877. His mother said he had not been well for two days, but had not thought him much sick. She said he was sick as his two little sisters had been, who were at this time convalescing. An examination of the fauces showed a small diphtheritic patch on one tonsil; externally on the same side the glands were slightly swollen and tender. I directed camphorated oil externally, and internally a saturated solution of chlorate of potass, alternated with quinine; and strong lemon juice applied to the fauces with a soft cotton-wool probang. I was to be notified if the boy was not better in the morning.

I heard nothing further of the case until Jan. 31, 11 p. m. Mr. P. came for me, saying he was afraid Charley had the croup. He was very much alarmed, as he had had two sons die from membranous croup, ten or twelve years before, and this was his only living son. I learned that the boy had been very much better since my former visit, and had only begun to develop symptoms of croup within the last three hours. He had been out to the barn several times during the day, which had been cold and rainy. I found him with considerable fever, fauces very red, no membrane except some slight strips far down in the pharyngeal space. He was very hoarse, and had considerable difficulty in breathing, and looked anxious and distressed. I gave an emetic of ipecac, which produced copious emesis; continued the chlorate of potass solution with compound syrup of squill added, and the quinine; the throat and upper part of the chest was covered with tobacco ointment and an onion poultice.

Feb. 1, 8 a. m.—The patient seemed much the same as on the night before. I applied a solution of nitrate of silver about the epiglottis, and commenced the use of lime water inhalations with the steam atomizer. 3 p. m.—Patient can only speak in a whisper,

pulse 120, sweating, looks very tired, takes milk freely, some nausea. 11 p. m.—Voice extinct, breathing very labored. I catheterized the larynx and gave an emetic of the sulphate of copper, with some relief. I told the father that in my opinion tracheotomy was the only hope.

Feb. 2, 7 a. m.—Child still alive, but does not respond to the sulphate of copper, as formerly. 9 a. m.—Apparently dying. After a hurried preparation, with the assistance of the father, a one-armed man, I opened the trachea and introduced a tube extemporized from the silver catheter at hand. The operation was attended with very little hemorrhage. In about half an hour he could breathe without being prompted, and had taken a little milk and whisky, and in response to the question if he felt better, nodded affirmatively. The temperature of the room was maintained as near 80° as possible, and the air moistened with steam from the atomizer.

During the afternoon a double rubber canula was procured; just before which an accident happened which almost proved fatal, and had much to do with the result of the case. The tube becoming obstructed, and not succeeding immediately in removing the obstruction, the little fellow caught the tube and tore it out, causing considerable hemorrhage from the deep plexus of veins, he became asphyxiated from blood drawn into the trachea, and some little time elapsed before the bleeding could be stopped and respiration established.

Feb. 3, 8 a. m.—Had passed a good night; pulse 112; had taken milk frequently and with relish. The wound was dressed with weak carbolized oil, and the neck enveloped in flannel. The wound had the appearance of being covered with a thin film of false membrane, and the neck was a good deal swollen.

Feb. 3, 3 p.m.—Was summoned on account of difficult breathing, which cleansing the inside tube did not relieve; removed the entire canula and with a pair of forceps extracted a plug of fibrine, which was moving up and down in the trachea, and acting like a valve. There was a good deal of false membrane in the wound and extending down the trachea. The swelling of the neck had increased very much since morning. Auscultation discovered mucous râles. The breathing was relieved for a time, then went

on increasing in difficulty, until about 8 p. m., when he suddenly died.

Case 2.—Elsie B., aged 4 years; previous health had been good, except occasional convulsions following whooping cough in her second year. I visited her first Jan. 28, 1877, for mild diphtheria.

Jan. 29.—Called and found Elsie improving; I did not see her again until Feb. 5, when I was called to see Fannie, another daughter, who was suffering from a malignant form of diphtheria, and who, by the way, had been taking sulpho-carbolate of soda since my former visit. Elsie was at this time running around the house apparently well, except an occasional very croupy cough. An examination revealed slight fever and a very reddened state of the fauces. The mother said she had been troubled with difficult breathing the two preceding nights, and she had herself administered ipecac. I prescribed bromide of potass and compound syrup of squill in a mixture, and recommended isolation from her sick sister.

Feb. 6, 9 a. m.—Patient evidently worse than on the previous day. The mother had been obliged to administer ipecac, which was followed by some relief and sleep.

Feb. 7, 9 a. m.—Patient had a very bad night; had been obliged to give much more ipecac to produce emesis than before; pulse 120; very great difficulty in breathing; voice almost extinct; still some appetite.

Feb. 7, 3 p. m.—Was summoned hurriedly by a servant, who said Elsie was dying. Found her struggling for breath, voice entirely extinct, lips and extremities blue. I gave an emetic of cupri sulphas, with full draughts of warm water, which produced copious emesis, followed by a hot foot-bath, hot compresses to the throat and chest, and the inhalation of lime-water vaporized by the steam atomizer, which relieved the more urgent symptoms. I proposed the operation of tracheotomy, and asked for assistance. 9 p. m.—Met Dr. C. N. Cooper, of Batavia, in council. The patient had had but one severe paroxism of dyspnœa since three o'clock. We remained with the patient until 1 a. m. Dr. Cooper went home to return again in the morning. I remained with the patient during the rest of the night.

Feb 8, 9 a. m.—Dr. Cooper having returned and death being imminent, I, with his and Dr. W. W. Ormsbee's assistance, the patient being etherized, opened the trachea below the isthmus of the thyroid gland. The loss of blood was trifling. The wound was thoroughly cauterized with solid stick nitrate of silver, and its angles brought together with strips of adhesive plaster. The neck was encircled with a strip of oiled silk, through a slit in which the tube was inserted into the trachea and held in place by tapes passing around the neck. A piece of old merino underwear, folded several thicknesses, was placed about the neck, a slit being cut for the inner tube. A small slit was cut in a second piece of oiled silk, and it was slipped over the inner tube to protect the merino from the sputa. A piece of wash blond lace was folded several times and laid over the open end of the tube, the air passing in and out through it, warming it, retaining, perhaps, some of the moisture of the exhaled air, and making it more natural. The expectoration was tinged with blood for an hour after the operation, when it became natural. The breathing was irregular for about the same length of time, probably from the combined influence of the dyspnœa and anæsthetic, after which the relief experienced from the operation was complete, respiration being 22, and the pulse 120 per minute. The air of the room was moistened by a large flat sponge filled with water and placed over the register of the furnace. The temperature was maintained at 76° or 78°.

Feb. 9th.—Removed the dressings and the entire tube. Cleansed the wound with a bit of sponge and warm water, and after drying, cauterized and redressed as before. On looking into the throat discovered diphtheritic patches on each tonsil; the nurse also called my attention to the vulva and anus where diphtheritic membrane existed. I cauterized them with nitrate of silver. The internal treatment was chlorate potass, and quinine with plenty of nourishing food. Complains of pain in her stomach probably due to the emetics.

Everything went on very favorably during the remainder of the treatment, the wound being dressed as above each day. I removed the tube the seventh day after the operation, fearing necrosis of the trachea, blood having appeared in the sputa, and

although she could not breathe the natural way, the opening in the trachea remained open and breathing went on very well; on the second day after she began to expectorate and cough up the membrane, and fourteen days after the operation she could breathe very well but could not cry aloud. This continued about six weeks at the end of which time her recovery was complete.

My limited experience would hardly justify me in holding or in advocating very rigid opinions regarding this operation; still I have opinions somewhat as follows: Do not postpone the operation until the last stage, as I did in the foregoing cases, but operate early, as soon as the voice becomes a whisper and there is marked interference with oxygenation, especially if the child is under eight years of age.

I do no think the operation of itself is a source of much danger if certain precautions are observed. The too free use of emetics previous to this operation comes in for its full share in causing a fatal termination.

Operate under an anæsthetic if possible, and slowly, opening the trachea below the thyroid isthmus. Be sure and cauterize the wound with solid nitrate of silver at least once in croup, and in diphtheritic cases every day as long as the diphtheritic process is going on in the system. The wound should never be closed by stitches, approximation of its upper and lower angles by adhesive plaster is much preferable. Do not cauterize the inside of the trachea. Encircle the neck with either oiled silk or a rubber band with a slit in it for the tube; it is a protection to the wound and neck and prevents chafing. Old soft flannel about the neck is essential, but do not cover the end of the tube with it. Blond lace, washed to free it from starch, and folded several thicknesses is the best covering to respire through: several pieces can be prepared, dipped in some disinfectant and dried ready for use.

I prefer a hard rubber double canula having a uniform calibre, and of a size to fit the trachea, not too tightly or too loosely, as an ill fitting tube will cause necrosis of the trachea. Avoid drafts and maintain an uniform temperature. Dryness of the tube and air passages is best relieved by a few drops of tepid water. In order to be thoroughly prepared for this operation, the practitioner should have about five canulas sized as follows: one

a little under one-fourth inch in diameter for a child under three years; one one-fourth inch for a child between three and five years; one one-third inch for a child between five and eight; one two-fifths inch for those between eight and twelve, and one one-half inch for those between twelve and fifteen.

The smallest tube should be two and one-fourth inches in length and its curve should be one-fourth of a circle; the length should be increased one-fourth inch for each succeeding size named above. All should have the same curve.

I am satisfied that if tracheotomy was performed more frequently in this country, it would enjoy the popularity which it does in many parts of Europe.

THE USE OF COLD AND HEAT IN FEVERS.

By Frank Allport, M. D., Sycamore, Ill.

In the treatment of the febrile state there are two methods of procedure, one of which is endorsed by a large portion of the profession both in this country and Europe, the other is struggling for a position, and already numbers among its advocates some of the best names known to medicine. They are apparently so diametrically opposite in their action as to excite the inquiry why they can both be used in dealing with the same affections. I have reference to the external application of cold and of heat. So pertinent indeed is the query that it is well worth while to stop and consider if the results of their employment may not be similar, although the means used are so different.

Internal heat is one of the most important of all the factors concerned in fevers of every description, and is invariably present. The extent to which it is found in each individual case militates largely for or against the recovery of the patient. It is therefore of great moment that some means be found by which we may nearly or quite free the system of this exalted internal temperature; bearing in mind always that *heat* is not the disease,

but the result of the retention within the body of the products of excretion.

Probably more than to medicine the profession looks to either one of these remedies (cold or heat) to bring about this end. Let us then briefly analyze the action of each, after which we may, by a comparison of their merits and demerits, arrive at a conclusion as to which we may look upon with the greatest reliance for the accomplishment of the object in view. First, then, as to cold. The first effect produced is a shock, which for the time being paralyzes the nerves controlling the vascular system, throws the blood to the viscera, closes the pores of the skin and exalts the internal temperature. In a short time a reaction generally sets in. The blood flows to the surface and relieves visceral congestion, the pores of the skin are opened, a gentle perspiration suffuses the body, and the temperature is reduced a certain number of degrees. Very soon a counteraction commences, the blood recedes from the surface and the original, or even more than the original, degree of internal heat is present.

Under the application of heat the action on the system is about as follows: In the first place, the blood gradually leaves the viscera and seeks the surface. The pores are opened and a perspiration breaks forth, which soon becomes profuse, and, as the system is emptied of the accumulated poisons, the temperature is reduced a certain number of degrees. After the heat is reduced and the perspiration limited, the temperature of the body again runs up to or within one or two degrees of the original, sometimes equalling it; but under proper management, in a fairly commenced case of fever, where the disease terminated favorably, I have never seen it exceed it. These may be said to be the respective actions of the two remedies.

It will be observed, that whereas with cold, shock and exaltation of temperature, are the effects produced; with heat there is no shock, no exaltation of temperature, and the good results at once become manifest. I have said in reference to cold, "a reaction *generally* sets in." I have heard and read of cases where patients never recovered; death occurring from the shock. The reaction then, does not always occur, in which case death is the result. It is reaction therefore, which does

the good, indeed which saves the patient's life from the first effects of the remedy, viz., closure of the cutaneous pores, shock, and increased visceral congestion. If I may use a non-medical illustration, the application of cold, is like the experiment of Mr. Squeers, who almost knocks poor Smike off the trunk with one hand, and saves him from falling with the other. It is not then to the immediate effect of cold to which the benefit may be ascribed, but to the powerful recoil of the system, from the shock produced by the application of cold.

To bear me out in these assertions, I will quote the words of the editor of the *British Medical Journal*,* while speaking of the external application of cold in fevers: "The only contra-indications to this treatment, are, first of all, hemorrhage from the bowels in typhoid fever, even if it be present in the slightest degree, perforation also precludes its continuance." These sentiments are from the pen of an advocate of this mode of procedure, and they would seem to show, that notwithstanding a reaction may take place, it is erroneous practice to plunge the patient into a cold affusion, thus still further congesting the already highly inflamed viscera. In the treatment of the febriculæ, we must bear one idea constantly in mind, viz., at present we have no specifics for this state, and we must treat the symptoms. The patient should be placed in the best possible general condition to recover. If any organ or organs, are found to be acting improperly, the error should be corrected. Perhaps more important than all, we must see to it, that the secretory and eliminative organs are acting with a normal, and even more than a normal degree of activity. Therefore, when we see, as we do, almost if not quite invariably, in the febrile state, that while more urea, carbonic acid, and other eliminative materials are produced, yet the quantity of these substances cast off, is *less* than in health, we must aim, by every possible means, to correct the error.

No one can doubt the usefulness of the skin as an excretory organ, in this predicament, and to it we should direct our attention first. I say "first" because the kidneys, bladder, etc., are in such a congested and diseased condition, that they are largely

* Feb. 3, 1872, page 131.

incapacitated for work, and only by a vicarious elimination can they be relieved of this state, and rendered equal to the task assigned them.

Dr. Davis* says that the only two cases of complete suppression of urine, which have ever occurred in his own practice, following scarlet fever, were benefited only by those remedies, which promoted the elimination of the retained elements through the *skin*, kidneys, and bowels. In these severer cases, specifics were set aside, and only such means adopted as were directed to placing the system in the nearest to a normal condition possible, viz., by looking to the excretions. If such treatment is correct in the severer cases, why is it not just as reliable in milder ones? And yet how often do practioners tamper in the beginning of fevers with so-called "specifics," etc., who are compelled, when the disease becomes of an alarming type, to resort to remedies controlling elimination.

Considering the foregoing facts, we are led to conclude, that profuse and steady perspiration, is a most desirable and important end to be attained.

It would appear that fever is simply a state of innervation produced by the septic influences of a (possible) "fever-poison," and kept alive by the non-elimination of natural and abnormal elements of excretion that should be cast off. The delirium and coma of scarlet fever are, then, simply symptoms produced by this innervated state, and the retention and circulation in the tissues of the brain of the manufactured, but not excreted poisons.

A comparison of the reduction of temperature, produced respectively by the application of external cold or heat, shows that the former is the most decided in its action. Dr. Beal† cites cases from the practice of Dr. Wilson Fox, where the temperature was reduced by a single immersion, eleven degrees. The reduction by heat has never, so far as I can learn, equalled this by several degrees. This might at first be deemed an argument in favor of cold. On the contrary, it is one against it, for there can be no doubt that such rapid and eccentric changes are generally

* "Clinical Lectures," page 80.

† *Medical Times and Gazette*, December 16 and 30, 1871, pp 731 and 789.

of positive injury. We must bear in mind that, after this excessive reduction of temperature, a counteraction takes place, and the thermometer will in a very short time register a rise of as many, and generally more than as many, degrees as were previously lost. Such decided and sudden changes cannot be of benefit. What we want is a gradual but sure declination of temperature, such as we obtain from the proper application of external heat. The temperature in this mode of treatment, under proper circumstances, and if the "sweat" is given often enough, rarely returns to its former height, but will register a sure loss, although it is not so rapid as in the treatment by cold. In this particular I would say that Dr. T. Clifford Albutt, A. M.,* an advocate of the "cold bath treatment," states that a too rapid diminution of temperature is positively injurious in fevers. With this idea in mind, he endeavors, while still clinging to the "cold bath," to somewhat modify the application of it, in order that so rapid a diminution may not be produced. Another reason why the "cold bath" should not be used, is that the patient requires too much careful watching, such as it is almost impossible for a physician in full practice to give. Again, Dr. Albutt says: "I would urge the continual presence of a medical man. The whole treatment must be managed with the utmost precision, and all tendencies to shiver or syncope, should be watched by a skillful observer, or irreparable damage may be done in five minutes." Now it is evident that only in a hospital can a physician be constantly with his patient (and even there it would be difficult), to act *immediately* upon the approach of certain symtoms, and a physician would hardly feel justified in placing such a powerful and easily fatal remedy in the hands of the laity. Is it then proper to continue the use of this remedy, so potent for evil, while we have, in heat, an agent capable of doing more good, with no practical risks, provided the patient receives reasonable care from a competent nurse, in the absence of the physician?

A comparison of the merits and demerits of the external application of heat or cold, in the treatment of fevers, may assist

* *Lancet*, December 23, 1871, p. 881.

in reaching a conclusion as to which is to be preferred, and for this purpose I have adjoined the following table:

Heat.	*Cold.*
No shock is experienced upon applying the remedy.	A shock is experienced.
Perspiration soon follows the application of heat.	Perspiration does not take place for some time after cold has been applied, *and is dependent upon a reaction*, which may or may not take place. In the latter event, a fatal result is apt to occur.
A gradual declination of temperature is observed.	A sudden and great declination of temperature is observed.
The temperature is not apt to rise above that registered at the commencement of the application, after the same.	The reverse is the rule.
Profuse perspiration is produced, and it does not require to keep the temperature down, as many applications per diem as with the application of cold.	Only a gentle perspiration is produced.
Only a reasonable amount of care and watching is required.	Directly the reverse is true.

SEVERAL persons in Berlin, Germany, fell seriously ill after partaking of American dried beef which is sold there in tin cans. A chemical examintion of the meat showed that the layer next to the lid of the can was strongly saturated with the salts of lead. The soft solder by which the cover was fastened was put on the inside so thickly that it came in contact with the meat and impregnated it with lead.

Clinical Reports.

ALEXIAN BROTHERS' HOSPITAL.

A Remarkable Case of Cancer of the Stomach—A Modification of the Stomach Pump.

Julius Raff, aged 29 years, has always enjoyed good health. Two years ago he left the service in the U. S. army, after a six years' term. Afterward, and up to about two months ago, he held the position of clerk in a country town in Wisconsin. In the beginning of last November he felt sick, complaining of a pressure in the stomach after eating, and vomiting. These symptoms grew worse rapidly, and within two months the strength of the patient was about exhausted, he being reduceed to a mere skeleton. In February, 1878, his friends brought him to Chicago, to the Alexian Brothers' Hospital, under the care of Dr. Mannheimer, with whom I saw the patient the first time, February 11th. From my note book I take the following statement of my first examination: Notwithstanding his great emaciation the patient shows a fair complexion. His mind is clear; he speaks cheerfully about his disease; night-rest undisturbed; there is no fever; pulse 64, and the temperature and moisture of the skin normal. The stomach bears no food; whatever is swallowed is rejected, sometimes soon, but ordinarily from 4 to 6 or 8 hours after eating. The masses which are thrown up consist of half-digested food and decomposed chyle, which are mingled with more or less viscid mucus. The patient has no appetite; he complains of a bad taste and a burning and choking sensation in the throat. The bowels are constipated; fæces dry, hard and gray; the absence of bile in the fæces is the more remarkable, inasmuch as there is no bilious discoloration of the skin or sclerot-

ica. No blood is found in the fæces. The abdomen appears empty and relaxed. In the middle between the xiphoid process of the sternum and the umbilicus, a hard tumor is detected. It has a horizontal direction measuring about two inches, and is about one inch thick. The tumor cannot always be felt, but, at intervals, it comes to the surface, and can then be seen as a distinct prominence at the place described. As soon as the tumor begins moving, the patient suffers great pain, which lasts from one to five minutes. Deep pressure in the epigastric region is always very painful. Lungs and heart and kidneys are in a healthy condition, while the liver is shown, by percussion, smaller than normal. The stomach is undoubtedly greatly dilated, as may be inferred from the extent of the tympanitic resonance, in the left epigastric and hypochondriac regions.

The diagnosis in this case offered some difficulties. Although the presence of the tumor, which evidently belonged to the stomach, suggested that cancer might be the cause of the disorder, yet there were some facts at variance with this supposition, viz.:

1. The age of the patient (29 years).

2. The short space of time—i. e. three months—since the first symptoms suddenly inaugurated the rapid decline of the patient.

3. The absence of any hereditary disposition, as far as this could be ascertained.

4. The relatively fair complexion of the patient. There was no indication of that characteristic cancerous cachexia which, although difficult to describe, is easily recognized by every practitioner.

In the second place we thought of ulcer of the stomach. The age and the absence of symptoms of cachexia would speak in favor of this supposition. On the other hand, the absence of blood in both the fæces and the ejections, would not contradict this diagnosis, since many cases are reported where men have died of gastric disorders, even without showing symptoms of a diseased stomach, and the post mortem revealed perforation by an ulcer as the cause of death.

The symptoms which distressed the patient most—vomiting, eructations, bad taste in the mouth and burning in the throat, occasionally severe pain—were all direct consequences of the gas-

tric catarrh. Therefore sodæ bicarb., magnes. carbon., Karlsbad salt, were prescribed, however with but little or no effect. Antiseptic solutions, as carbolic acid, salicylic acid, salicylate of soda, failed entirely. Morphia alone gave temporary relief from pain. We then resorted to the stomach pump. We introduced the tube for the first time, February 15th. A great quantity of decomposed chyle was removed and the stomach washed with tepid water, afterward with a solution of Karlsbad salt. This operation had a decided effect for the next two days; the patient did not vomit, the burning sensation in the throat entirely ceased, the appetite and digestion were tolerably good, and the paroxysms of pain seemed less frequent. However, on the fourth day vomiting recurred; we again applied the stomach pump and an enormous quantity of decomposed food and mucus was removed. The operation lasted about twenty minutes. Again the effect of washing the stomach was beneficial. The next two or three days the patient felt greatly relieved; he ate and slept well, so that his death, occurring in the afternoon of February 28th, took us rather by surprise.

Unfortunately I was not present at the post mortem, which on the next day was made by Dr. Ernst Schmidt and Dr. Mannheimer. They gave me the following notes: "Beside the extreme emaciation of all organs, there was nowhere any morbid change, except in the stomach. The pyloric portion was transformed into a hard, tense, somewhat nodular tumor; its length measured about 3 inches, while its thickness was from $1\frac{1}{2}$ to 2 inches. It occupied the whole circumference of the pylorus, the opening of which was so narrow as to allow only the passage of a grooved director. The duodenum was relaxed and empty, as was also the remainder of the intestines. The stomach was greatly dilated and distended with gas. It filled the entire left hypochondriac region, the diaphragm being considerably displaced upward. Its contents consisted of gas and a large quantity of decomposed fluid. The liver was smooth, the secretion of bile seemed unimpaired. The tumor was not connected with the adjoining organs; its surface was smooth. Some retroperitoneal glands were enlarged. The tumor, upon dissection, possessed all appearances of a genuine cancer.

The condition of the stomach, as revealed by the autopsy, throws light upon those dark points in the diagnosis, which I have mentioned previously. The extreme stricture of the pyloric portion fully explains what puzzled us so much in the diagnosis of cancer, namely, the short duration of the disorder and the absence of general cachexia. It seems that from the outset the tumor increased in size as an *uniform thickening of the wall of the pylorus*, resulting in constricting its opening. The mere mechanical consequences of the extreme stricture became fatal before cancerous infection of the system took place. *The patient died simply of inanition in consequence of an extreme stricture of the pylorus.*

The apparatus we used for washing out the stomach, was a very simple substitute for the original stomach pump. It consisted of the ordinary stomach tube, to which the one end of a rubber tube, some 5 to 6 feet in length, was attached, while the other end was connected with a funnel or a fountain syringe. Before the tube was passed into the stomach, the vessel was filled with water, and the air expelled from the tube by raising the vessel to fill the tube with water. As soon as the sound was in the stomach, the water was allowed to flow. The higher the vessel was raised, the quicker it emptied itself, and was refilled before the level of the water sank down to the opening, near the bottom of the fountain syringe, in order to avoid aspiration of air. When we thought we had introduced enough water into the stomach, the vessel was put upon the floor, when the water, mixed with the contents of the stomach, would run out. Thus, by alternately refilling and emptying the cavity of the stomach this organ may be thoroughly washed out, till all its contents are removed and the cleansing water returns clear.

The liquid to be used may be tepid water so long as there are contents of the stomach to be removed, after which any medicated mixture the physician deems most appropriate for the mucous membrane, may be substituted. In our case we used for that purpose Karlsbad-water, prepared with the natural Karlsbad-salt, which can be obtained of all druggists. During the operation the patient may remain in bed, in a sitting position, or sit up in a chair. Since the ordinary stomach-pump is a rather expensive

and complicated instrument, and therefore not within the reach of every practitioner, it seems to me that the simple and cheap apparatus we used might induce physicians oftener to resort to the procedure of washing out the stomach.

HENRY BANGA, M.D.

CHICAGO, March, 1878.

NOTES FROM PRIVATE PRACTICE.

Chronic Anæmia, Associated with Pregnancy.

Mrs. B——, aged 26 years, married, and of healthy parentage, came to my office for treatment July 7th, 1877. She was then in the eighth month of pregnancy, was very anæmic, and complained of great debility, irregular action of the heart, pain in the back, epigastrium and right side, loss of appetite, etc. She stated that she had been confined two years ago and had then had a severe attack of child-bed fever, never having been well since. She was somewhat emaciated, and presented a cachectic appearance. The integument of the face, hands, and a part of the body, were of a bronzed hue. The tongue, gums, lips, and mucous membrane of the mouth were bloodless; the tongue large and flabby, and its mucous membrane displayed five or six ashy looking ulcers. Pulse, 120, weak and irregular. Respirations 20 to 25, and greatly embarrassed. The action of the heart was tumultuous, and upon auscultation at the base of the heart, a loud systolic bruit could be heard over the aortic and pulmonary valves.

The urine was of an amber color, and acid reaction; deposits when cool a sediment composed of urates, phosphates, and uric acid; specific gravity 1.010, no albumen or sugar.

Diagnosis: Chronic Progressive Anæmia.—She was ordered iron, quinine, strychnia and phosphorus, with a highly nutritious diet.

July 11th.—Some improvement; appetite better, and is not quite so weak; continued same treatment.

July 13th.—Was called to see her, and found her suffering from an attack of remittent fever, attended with continuous nausea

and vomiting, and neuralgic pains in almost every part of the body; great dyspnœa, throbbing of the carotids, and the impulse of the heart could be felt over very nearly the whole of the anterior portion of the chest. The pulse was so frequent and irregular that its rate could not be definitely noted, but ranged from 120 to 150, and was very feeble; temperature 99½° F.; inability to assume the upright position without danger of fainting. I prescribed digitalis, belladonna, morphia, and potassic bromide, and moved the bowels with a mild laxative, giving quinine every two hours. To relieve the nausea and vomiting, mustard was applied over the stomach; she also had bismuth, lime-water, and sweet milk every hour; extract of beef also to be given every hour or two.

July 16th.—Some improvement.

July 17th.—The fever was relieved.

July 18th.—Patient doing well; ordered that the iron, quinine, strychnia, and phosphoric acid be given again as before, it having been discontinued during the attack of fever. She continued to improve from that time, and on the night of the 10th of August I was summoned to attend her in labor.

When I arrived at the house and saw her, I was astonished at the great improvement she had made; the pallor had left the mucous surfaces, the heart was now acting normally, and she expressed herself as being well. Her labor pains were feeble, and upon vaginal examination, I found that the os had not dilated, neither was it affected by the pains. Being satisfied that labor had not set in, I gave her an opiate and left.

On the 25th I was again called to attend her, and found her in active labor, the os dilating. Labor progressed well for one or two hours and then ceased, the os refusing to dilate, and becoming rigid and very sensitive. Under the use of hot baths, chloral, morphia, and rupturing the membranes, it gave way, and she was delivered of a fully matured fœtus in a state of decomposition. The patient made a rapid recovery and is now in the best of health. In conclusion, I desire to call attention to a few points in this case: 1st. To the rapid recovery of this patient under such unfavorable circumstances, viz., pregnancy existing as a complication. 2d. To the efficiency of this line of treatment,

viz., iron, quinia, strychnia, and phosphoric acid, with good diet. 3d. To the length of time the fœtus remained in utero after its maturity and death; for, according to her reckoning, labor should have occurred on the 10th day of August, at the time she had spurious pains. The patient says that she never felt any movements of the child after that date. Then we must conclude she carried a dead fœtus from the 10th to the 25th of August.

J. M. MATHES, M. D.

CARLISLE, Ind., Dec. 29th, 1877.

Recovery from Poisoning by six drachms of Chloroform taken in the Stomach.

I was recently called at 10:30 a. m., to see a young lady who had just been found in an unconscious condition, presumably from the effects of an overdose of chloroform.

From what I learned of the family I think that the patient had taken the poison half or three quarters of an hour before I saw her; I found her thorougly anæsthetized, respiration nearly normal and pulse eighty per minute.

The patient, who had already vomited profusely, vomited again shortly after I entered the room, so that there seemed no need of emetics or the stomach pump.

From the odor of bottles found in the apartment, I suspected that the patient had taken hydrate of chloral, but there was no means of ascertaining the quantity as she had carefully removed the label from the bottle in which the poison had been procured.

I sent at once for carbonate of ammonia; but when it arrived the patient was unable to swallow, the respiratory efforts were becoming inefficient and the pulse was gradually failing.

The patient was given frequent inhalations of ammonia, and the twentieth of a grain of sulphate of strychnia by hypodermic injection; another dose of one-fortieth of a grain of sulphate of strychnia was given about three quarters of an hour later. Finding the action of the heart and respiratory muscles steadily failing, I dispatched a messenger for an electric battery, but before his return, and while I was alone with the patient, the respira-

tory efforts ceased so that life was only sustained by artificial respiration. In this emergency I sent for Drs. E. Ingals and Norman Bridge; both soon came in and assisted me for the next hour and a half.

Artificial respiration became necessary about two hours after the poison had been taken. Electricity was applied about half an hour later, one pole to the nape of neck and the other to the pit of the stomach and various portions of the chest. The pulse by this time had fallen to fifty-two per minute and the respiration was wholly artificial for some time.

From twelve o'clock until half past one, artificial respiration was maintained, and during the greater portion of the time the battery was in frequent use.

During a considerable part of this time if artificial respiration was suspended there would follow a few faint respiratory efforts which would then cease, so that had the patient been left for five minutes death would surely have been the result.

About an hour after the first dose of strychnia, considerable rigidity of the muscle of the arms occurred and continued for fifteen or twenty minutes.

Perfect anæstheeia was maintained for three hours, when a slight movement of the eye, upon touching the conjunctiva, indicated returning consciousness. Half an hour later we noticed the first voluntary movement and at three p. m., about five hours after the drug had been taken, the patient awoke. Respiration had then been regular for some time; a half hour later I left the patient, conscious and able to swallow the strong coffee which had been prepared for her.

I called again in a couple of hours and found her comfortable excepting for frequent attacks of nausea and vomiting. She informed me that she had taken twenty cents worth of chloroform, which from her description was a trifle more than six drahms.

The patient refused to give the name of the person who sold her the chloroform, and probably it would be of no use to find out, for people who wish to take poison will always find some druggist willing to sell it to them; and if it be true, as my friend Dr. Brower is disposed to believe, that nine tenths of those who attempt suicide are insane, possibly they who encourage these

unfortunates in their efforts at self destruction, are as kind as the physicians who attempt to thwart them.

E. FLETCHER INGALS, M. D.
188 CLARK STREET, CHICAGO.

Enormous Dilation of Sigmoid Flexure, with History of Case.

I was called January 31st, 10 a. m., to see J. B. Farmer, aged 51 years. He had been subject to occasional attacks of "bilious colic" for nearly ten years, during which he vomited frequently and severely, and suffered from severe pain in the bowels. He had been troubled with constipation, especially preceding these attacks. He had also not felt well for nearly a week, and the day previous, began having severe paroxysmal pain in the bowels, accompanied by nausea and vomiting, which continued during the night and were still present. The skin was about normal; tongue dry, white fur in center; pulse 70, soft; temperature normal; appetite lost; bowels constipated; abdomen slightly tympanitic and somewhat tender; no tumor could be felt; the material ejected by vomiting consisted of bile, mucus and fluids taken into the stomach. I administered hypodermically morphia sulph. gr. $\frac{2}{3}$, atropia sulph. gr. 1-60; ordered a large hot poultice applied to the abdomen continuously, and small bits of ice given ad libitum; also, bismuth sub. nit. gr. vi. every four hours. I also left a powder containing ten grains of calomel, to be given at night. I called early next morning; the calomel had not operated; there had been no pain nor vomiting since last visit. Pulse 68, temp. 98°, resp. 20. I administered one tablespoonful of rochelle salts, and after waiting several hours, used an enema which was passed at once without any fæcal matter. I left another dose of salts to be given at noon if the bowels had not moved.

I was called again at 2 p. m. in haste, to find my patient suffering great pain in the hypogastric region, and vomiting occasionally. His bowels had not moved; several enemata had been given; pulse 72, temp. 99°. I at once gave up any further effort to move the bowels, and administered a hypodermic injection as before. Patient soon became quiet, and rested well for several hours. The poultice was continued, and fluid nourishment given

freely. At 8 o'clock p. m. he was suffering some pain in bowels; no vomiting; pulse 70, and had passed some mucus from the bowels two or three times with considerable tenesmus. At 10 o'clock p. m. the pain very severe; abdomen more tympanitic. I administered another hypodermic injection, which gave temporary relief.

The patient frequently tried to eject gas from the stomach by belching. The swelling of the abdomen kept increasing until midnight, becoming finally enormous, and causing great distress. Pulse 78, temp. 99°, resp. 36, short and labored. I administered various carminatives, but without relief; ordered turpentine stupes and used a rectal gum elastic tube, hoping to relieve the colon of gas, but could not pass it beyond the sigmoid flexure. The patient begged to have the "wind pumped out of his stomach." I passed a No. 10 catheter into the stomach, when quite a quantity of gas escaped. The abdomen was so tense that it seemed as if the gut must rupture. A distinct ridge revealed (as I thought) the outline of the distended ascending colon. I now left him, to get a trocar, intending to tap the colon. When I returned two hours later (3 o'clock a. m.), his suffering was most intense; pulse 140, temp. 102°, resp. 40. His wife would not permit the trocar to be used. I therefore administered injections per rectum of a decoction of tobacco, which seemed to give temporary relief.

I kept him quiet with hypodermic injections until Doctor S. M. Hamilton, of Monmouth, who had been called in consultation, agreed with me as to the necessity of tapping, and very skillfully operated, perforating, as we supposed, the ascending colon, and giving vent to a large quantity of offensive gas. This gave great relief. The respiration fell to 30, pulse, 132; abdomen quite tender.

He still passed mucus occasionally with tenesmus. I continued the opiates and concentrated fluid nourishment with whisky, and yielding to the wishes of the friends, injections were administered occasionally of a solution of ox gall. His wife thought that "if he could only have a passage from the bowels he would get well."

At eight o'clock p. m., the patient was delirious; no pain;

pulse 140, small; abdomen distending rapidly. At 10 p. m., delirium continued, the abdomen was very tense; respiration 40. At 11 o'clock I tapped the bowels again about half an inch above first puncture, permitting the escape of a still larger quantity of gas.

The respiration fell to 24; pulse 144, and thready. He rested quietly until about 3:30 o'clock a. m., when he began to sink, and died at about half past four.

Autopsy ten hours after death. Rigor mortis marked; on opening the abdominal cavity, I cut down upon what proved to be an immense sac-like dilatation of the sigmoid flexure, which entirely covered the anterior surface of the bowels, and which we had punctured on the right side, instead of the ascending colon; it extended as high as the cruciform cartilage, and was perfectly black from congestion. Further examination revealed extensive enteritis, and general peritonitis. The sac was empty, its walls thick and muscular, and it would hold at least a gallon. No fæcal accumulation in any part of the bowels; no apparent contraction below the sac; no morbid deposit in walls of rectum. The liver and spleen were congested and somewhat softened; other organs healthy.

Query. At what time did general inflammation begin? Did the purgatives administered light up, or only aggravate an already exisiting entero-peritonitis? I did not diagnosticate the above until within 24 hours of death. Did it exist prior to that time, with a pulse rate of 70, and temperature of 98½°? Will some one please answer?

H. L. HARRINGTON, M. D.

WARREN CO., ILLS.

The Value of Electricity in Paralysis.

Dr. Brown-Séquard, having recently lectured in our city, the following case may be more than usually interesting. The chief object in reporting it is, however, for the purpose of calling the profession to the importance of the immediate use of electricity in these cases, instead of delaying for several days as recommended by most writers upon the subject.

Let it be remembered that the sooner the function of respira-

tion, for instance, is restored—when stopped by hanging, drowning or other causes of suffocation—and the shorter the duration of its broken continuity, the better will be the chances in both instances for the patient's recovery.

This will also be strikingly observed in the causes which produce anchylosis.

The deduction to be made is, this: *the quicker the nerve cells are aided in the performance of lost function, the greater hope there will be of restoring them to permanent normal activity.* Delay here must therefore be dangerous if anywhere.

What, then, can accomplish this quicker than electricity?

Case: Mrs. C——, an apparently healthy married lady, American, age 27, seven and one half months pregnant; somewhat subject to insomnia and nervousness; the mother of three children.

On the 17th of last December, after running a couple of blocks to catch a street car, she was suddenly seized with total paralysis of the right side of the body and face. When seen, two and one-half hours subsequently, she was found in this condition: face contorted and livid; right pupil slightly dilated; forehead a trifle hot; right arm and hand a little cool; she was entirely speechless and vision obscured; perceptions blunted; hearing obtuse; breathing somewhat stertorous; pulse normal; respiration 12: heart not examined unfortunately. Ordered cold to the head and warmth to the feet, and applied immediately *with gentle power*, the positive electrode of a Kidder's machine to the base of the cerebellum, the other to the foot, alternately to the hand, retaining the first at the neck, during the whole time of employing the current, about half an hour.

After it was applied in this manner for five or eight minutes partial articulation was possible and the power of mobility partially returned; both became almost normal at the end of one hour. But, owing to so many friends calling, in mistaken kindness to see her, all the former symptoms returned after a cessation of three hours.

May I say that when called an hour after the second attack I had little regret? Let me state that the therapeutic value of the electricity was so thoroughly proven by the second applica-

tion acting as promptly and efficaciously as in the first attack, that it seemed a positive demonstration of its value, and left scarcely any room for doubt. The patient was treated, for a few days, with 1-20 grain doses of strychnia and grain doses of quinine. Six weeks after the attacks she had a perfectly natural labor and a moderately healthy child.

For two months previous to the paralysis she had been subject to slight opisthotonos every two or three days; since then these attacks have been much less frequent. On account of the pregnancy, I did not push the strychnia to its full therapeutical action. It seems probable that the dorsal tetanus may pass away upon resuming the strychnia treatment. Much experience has taught the writer the great value of electricity in nerve-cell difficulties, when used promptly and of *moderate* strength.

WM. E. RENNOLDS.

SPREAD OF CONTAGIOUS DISEASES.—A contemporary medical periodical has recently called attention to the possibility of transmitting contagious diseases by the medium of books in public libraries, which frequently circulate between the homes of the healthy and the abodes which are stricken with pestilence.

Another method of extending the contagion, certainly of some of the exanthemata, may be found to be the handling of articles in the shops of dry goods merchants. We recently saw in such an establishment a young girl inspecting some materials for dress, whom we recognized as the inmate of a household, one member of which had variola. Surely the next lady, unprotected by vaccination or previous diseases, who might chance to handle the same goods, would run a terrible risk.

A MEETING of the University of London was held January 15th to consider the new supplemental charter providing for the admission of women to degrees in all the faculties. The question was warmly debated. The vote stood 242 in favor of and 132 against it. The university will ask the government for powers to grant the same degrees to women as it now grants to men.

Society Reports.

SOCIETY OF PHYSICIANS AND SURGEONS.

REPORTED BY JUNIUS M. HALL, M. D.

Regular meeting at Grand Pacific Hotel, March 11th, 1878, President Wm. H. Byford, M. D. in the chair.

The minutes of the last meeting were read and accepted by the Society. Dr. Henry W. Boyd was elected a member of the Society.

The following paper on EXFOLIATION OF THE COCHLEA was then read by Dr. S. O. RICHEY.

This process is a comparatively rare one, and is one of the results of chronic suppurative inflammation, which in its course involves the labyrinth.

The membrana tympani has generally been destroyed, and the ossicles of the middle ear have previously been lost. Sometimes it has been complicated with polypi and mastoid abscess. In many of the cases observed, the cochlea alone of the labyrinth has been thrown off, while in other cases the cochlea, vestibule, semi-circular canals, etc., have been exfoliated.

It has been claimed that some power of audition has remained after the cochlea alone has been removed, but that when the whole labyrinth has been destroyed no hearing power has remained, while there has usually been facial paralysis.

It is difficult to decide, without an autopsy, that no part of the labyrinth except the cochlea has been lost, unless the surgeon is present, each time the ear is syringed, so that he may know what is cast off when he sees it. It is well known that the ossicles are often washed out by the patient or his friends without being

seen by them. May not a sequestrum from the labyrinth as easily escape notice?

Facial paralysis accompanying chronic suppurative inflammation of the tympanum, is not a reliable symptom of the destruction of the entire labyrinth, though it be associated with complete deafness, as it may arise from other causes.

I have known one case in which partial paralysis of the right portio dura seemed to be due to the pressure of accumulated pus in suppurative inflammation of the right middle ear. There was no reason to suppose the labyrinth was at all affected, as the hearing was improved by removing the pus from the middle ear, and the paralysis was relieved when the discharge ceased. It has been my good fortune to have under observation at the Illinois Charitable Eye and Ear Infirmary, two cases in which the cochlea became necrosed, and was extracted.

The first case is that of Daniel Gubbins, aged 8 years, who came under care as a dispensary patient, May 30th, 1876. The statement of the mother of the boy is, that more than 8 months prior to this time, the boy had been sick with measles, and during his sickness, "he had a bad ear ache" in the right ear, which "got very red and swelled up."

A day or two afterwards "he had a gathering" in that ear. She claimed to have washed several "gravels" from the right ear, which she thought might have been the cause of the inflammation. These were in all probability the ossicles of the middle ear.

At the time of his application for relief, the tympanum contained fetid pus, which escaped from the external meatus, and through two other openings, one above, and the other behind the auricle. The pus escaping from the fistula above the auricle had burrowed under the retrahens muscle, and had formed a sinus at least an inch in length. Necrosis of the squamous portion of the temporal bone had occurred at the upper opening, about which, in consequence, there was unhealthy and excessive granulation.

Several spiculae of dead bone were taken from this region, and the granulations were reduced by the solid nitrate of silver. The membrana tympani was entirely destroyed, and the external

meatus and middle ear contained numerous polypi, which were extracted, and their bases cauterized. Medicated solutions could then be forced into the meatus and out through the artificial openings, or into these openings and out through the meatus.

The whole right side of the head seemed enlarged, and the child staggered if he attempted to walk alone; the mother steadied him by keeping her hand on his shoulder.

Even after he had improved greatly, if he endeavored to cross the room alone to a chair on the opposite side, he would go to a point somewhat to the left of the chair, until he came near it, when he would stop, change his deviation and reach the chair.

Instead of carrying his head erect, he leaned it very much towards the left shoulder.

If he were asked a question, he would after some hesitation, answer in a quick jerking manner. He was pallid, slept badly, and had a poor appetite, but he did not complain of any pain at this time.

Hearing distance, right ear=$\frac{0}{48}$.

Profuse granulation took place in the sinus behind the auricle, and continued, regardless of the efforts made to control it, until it became necessary to open up the sinus.

In doing this the retrahens muscle had to be cut across, and of course the auricle fell forwards and below the plane of the other auricle, giving to the patient a somewhat peculiar appearance. The cicatrix, by contraction, has restored the pinna almost to its former position. The improvement has been gradual, and although the suppuration has nearly ceased many times, it has been again brought on by inattention at home and by exposure. The treatment has been cleanliness, and the application of carbolized and astringent solutions, the astringent being changed from time to time.

A strong solution of the nitrate of silver has been applied once a week.

Sept. 15th, 1877.— The necrosed cochlea was removed from the middle ear in which it could be seen. It is nearly perfect in form. At no time has there been any evidence of facial paralysis, so far as has been observed, nor does there seem to be any power of audition on the right side.

Every sound he recognizes he attributes to the left ear, even though the meatus of that side is closed.

The *second case* is that of Mr. Bernhard Sturm, aged 40 years, a resident of Jefferson county, Ill., who became an inmate of the Illinois Charitable Eye and Ear Infirmary, May 19th, 1877. His history, as given by himself, is as follows:

"He does not know that he had any trouble with his left ear prior to his tenth year. At that time, while standing on ice, he was thrown down and his head struck the ice with so much force that he was insensible for a day and a night afterward, and he does not think he has heard anything with his left ear since." In the cranium at the junction of the sagittal with the lambdoidal suture, there is a depression so deep as to receive a finger, its length being in the direction of the lambdoidal suture. This he claims to be a result of the fall. Subsequent to the fall, he felt no inconvenience except as to the loss of hearing in the left ear, until eight years ago, when it began to have a disagreeable odor, and continued to do so, although no discharge was noticed until the middle of March, 1877.

During the two winters preceding that of 1876-7, he had constant and severe pain in the left ear, which caused him much loss of sleep. This pain left him each spring when the weather became warm, until 1877. The left ear was unusually painful immediately before it began to discharge, March 1877. From the time suppuration began until he came to the infirmary, he could obtain only one or two hours' sleep in the twenty-four. He claims to have been several times "out of his head" with pain. For many weeks before he came into the infirmary, he could not walk alone because of dizziness, and if he attempted to turn around quickly, he would fall. Dr. J. H. Newton, his family physician, writes in regard to his case: "About March 12th, 1877, after a few days' exposure to a cold rain, he was taken with intense pain in his head and ear, accompanied with rapid pulse, vomiting and delirium. Upon the subsidence of the first fever, diplopia showed itself, and remained with him while he staid here, together with unsteady gait and confusion of ideas. Somewhere about May 1st, a small piece of bone,

very much corroded, came out of his ear. I thought it a portion of the malleus."

The patient also mentioned this piece of bone, and compared it to a grain of wheat in size and shape.

When he was admitted into the infirmary, he had severe pain all through his head, referable particularly to the left temporal region. His appetite was poor, and he complained of constant nausea. His countenance was pallid, his gait unsteady, and he weighed 125 pounds. There was diplopia, due to the divergence of the left eye, and the vision of that eye was somewhat confused. Nothing was done for this directly, but the difficulty disappeared in about one month, under the treatment to which the ear was subjected. In the external meatus, near the membrane of the drum, growing from the anterior and upper portion of the canal and nearly filling it, was a polypus.

No portion of the membrane of the drum remained, the ossicles had been lost, and the middle ear contained several polypi, bathed in pus. These polypi were removed with forceps, and their bases destroyed with chlor-acetic acid. Hearing distance, left ear=$\frac{0}{48}$.

Two days later the meatus was so swollen that it would admit only a small probe with a little cotton twisted tightly about it. By this means nitrate of silver was applied to the external meatus and the middle ear, and the swelling very gradually reduced. The pain in the head continued, except when relieved by blisters over the mastoid process, by bromide of potassium, or by quinine, until the first sequestrum, a portion of the cochlea, was removed, Oct. 19th, '77.

Suppuration also continued freely during this period, after which it immediately diminished, until it was almost imperceptible, and the patient was free from pain.

The external meatus slowly resumed its natural size, the patient slept comfortably, his appetite improved, and he gained in weight until Nov. 20th, when he weighed 153 pounds, three pounds more than his usual weight.

Nov. 20th. A second sequestrum was taken from the middle ear. I had touched it and turned it over two days before with a probe, and it seemed then to be buried in the soft tissue, in the posterior portion of the tympanum, near the mastoid cells. The

day it was removed, it could be seen, beyond the middle ear, and was withdrawn by a small hook. Its shape and structure indicate that it was thrown off from the mastoid cells. Since that time no suppuration has occurred in this ear, nor has there been any pain in it.

Dec. 29th.—A new membrane of the drum was recognized by Dr. S. J. Jones, occupying the usual position of the membrana tympani, but lacking of course the support of the ossicles. It was less concave externally than is common.

When the middle ear was inflated the membrane could be seen to move outward. It would resume its original shape and position when the air was withdrawn from the middle ear.

Bromide of potassium diminished the pain in the head for a short time, early in the treatment of the case, and afterwards seemed to be useless. Sulphate of quinine was substituted for it, and relieved the prominent symptom. The patient had lived in a miasmatic district, and the presence of a malarial element is probable. The watch cannot be heard when pressed upon the left auricle. If one tip of the diagnostic tube be placed in the left external meatus, and a vibrating tuning fork be placed in contact with the other end of the tube, he does not hear it. If a vibrating tuning fork be placed on any portion of the cranium, he always attributes the sound to the right ear. The voice is heard with much more difficulty, if both meati are occluded, than if the right meatus alone be closed. Thus the evidence of power of audition in the left ear is entirely negative in its character.

That there is hearing power in this ear may be possible, but if so, it is too small to be of any practical value.

Each of these cases presents some points of special interest. They are similar in the unsteadiness of gait, having a tendency in direction toward the healthy side.

The first sequestrum, in the case of the man, is smaller, more imperfect, and was more difficult of removal than that of the boy, whose cochlea is nearly normal in shape. The boy had mastoid abscess, with free communication between the mastoid abscess, the external meatus, and the pharynx. Parts of the temporal bone were lost by necrosis, and he leans his head toward the shoulder of the healthy side.

In the case of the man, pain in the head existed for a period of several months, and there was diplopia, due probably to some interference with the healthy action of the third nerve, which supplies motion to the internal rectus, or of the sixth nerve, which performs the same office for the external rectus.

The treatment has been much the same in each case, nitrate of silver being the chief application locally.

Dr. Richey then exhibited the specimens of necrosed bone removed from the two patients. At his request both of the patients were present, and an opportunity was given each member to examine them per speculum.

Considerable discussion followed.

Dr. Montgomery had listened with great interest to the report of the two cases by Dr. Richey. He had never met with a case nor had he seen mention of a case where the membrana tympani had been restored after exfoliation of the cochlea. It was certainly a very rare result.

In acute suppuration with a tendency to mastoid complication, he had had very good results from the use of the tincture of iodine as a counter irritant, applied all around the auricle. Internally the parts should be kept thoroughly cleansed, and astringents and stimulants occasionally applied. Nitrate of silver is his favorite application.

Dr. Bevan related one or two cases to show the great mental depression and lack of self confidence in those who had suffered for any length of time from serious ear trouble.

Dr. S. J. Jones reiterated the sentiments of Dr. Bevan. He considered it very unfortunate for the patient, that he should allow his disease to continue for so long a time, before applying to the surgeon for relief. If application were only made when the disease first showed itself, the hearing would undoubtedly be greatly benefited in the majority of cases.

Dr. S. J. Jones presented three additional cases in which there had been closure of artificial openings in the membrana tympani, the result of spontaneous perforation, occuring as the result of suppurative inflammation of the middle ear. They presented different aspects of the drum membrane after such closure, in all of which the new membrane formed, seemed to be thinner than

the normal membrane of the drum. They showed how incorrect is the general impression, that any opening in the drum membrane is permanent and that it is fatal to hearing. Allusion was also made to another fallacious impression that it is dangerous to check a suppurative process of long standing in the ear, lest metastasis occur. This discharge being a consequence of an inflammatory process, must find an exit, and it usually does so though the drum membrane and occasionally, also, though the mastoid process. There can be no danger in controlling the inflammation which is producing this discharge and destruction or alteration of the tissues locally, and which often impairs the general health.

The course of treatment usually pursued in these cases is thorough cleansing of the parts as of primary importance, and following this with stimulants and astringents. Strong solutions of nitrate of silver, and also tincture of myrrh are serviceable.

A case of double congenital coloboma of the iris (in a child two years old) was also presented at the meeting. In the right eye the coloboma is upwards and outwards, whilst in the left eye it is downwards and outwards. There is present alternating convergent strabismus, but the left eye is more relied upon by the child for vision than is the right one. There is no evidence of a similar affection in any other member of the parents' families.

The history of three similar cases of coloboma in one family which had recently come under Dr. Jones' notice was also given. Three out of eight children were thus affected. The opening being not only through the iris but through the choroid as well, so that the sclerotica could be seen with the ophthalmoscope, almost to the entrance of the optic nerve. Their ages are respectively ten, five and two years. Children born between these had no such defect, nor could any information be obtained of any similar cases in either of the parents' families, nor of any of hare-lip or of cleft palate.

The meeting then adjourned.

CHICAGO MEDICAL SOCIETY.

Regular meeting, Monday, March 4, 1878. President Dr. E. INGALS in the chair; 20 members present.

Methods of measuring the lower extremities.—Dr. JOHN BARTLETT read a paper in which he pointed out the defects of the commonly adopted modes of measuring the length of the legs. He then exhibited a new apparatus which makes the measurements perfectly reliable; he explained the principles upon which the apparatus was constructed, described its construction, and demonstrated its application.*

Regular meeting, Monday, March 18, 1878. President Dr. E. INGALS in the chair; 32 members present.

Dr. T. D. FITCH read the *Report on Obstetrics*, dwelling at some length upon the following subjects:

1. *Use of Anæsthetics in Labor.*—This question was thoroughly ventilated at the meeting of the American Gynæcological Society last year, and at the meeting of the Detroit Medical Journal Association. The discussion on both occasions revealed the fact that the leading obstetricians are far from being unanimous in their opinion regarding the use of chloroform or ether—the harmlessness or injuriousness of anæsthesia. The essayist's view of the question is that anæsthesia, partial or complete, has a strong tendency to diminish the force and frequency of uterine contractions, or of abolishing them entirely; that it also abolishes the contractions of the abdominal muscles and diaphragm which materially aid in the expulsion of the fœtus. Anæsthetics materially interfere with the third stage of labor, and predispose to post-partum hemorrhage. "I have had sufficient experience in this matter to convince me that they should not be used under any circumstances in this stage of labor, not even when manual delivery of the placenta has to be

* We shall publish the full description, with illustrations, in an original communication on this subject by Dr. Bartlett in our next issue.—ED.

resorted to." He prefers ether to chloroform, and gives an alcoholic stimulant from fifteen to thirty minutes before the anæsthetic.

2. *Hot water as a hæmostatic.*—Considerable has lately been written on injections of hot water to arrest uterine hemorrhages. Instances from American, French and German literature were quoted to show the successful application of hot water in metrorhagia. The writer's experience fully confirmed these reports. He tried it in two cases of abortion, the flowing was excessive and the patients were almost pulseless. The hot water acted like magic; in a few moments all flowing ceased and in less than half an hour the fœtus was expelled. Both patients made excellent recoveries. In eight cases of menorrhagia in which the flowing was very profuse, the hot water injections proved most beneficial, in every case controlling the flowing. These hot water injections (105 degrees F.) are more pleasant to the patient than the cold water, and never cause any dangerous reaction.

3. *Management of cases of abortion, especially of its third stage.*—On this subject a very interesting debate took place at a meeting of the New York obstetrical society in last February. The management favored by the majority was to dilate the os uteri, and then give ergot to expel the fœtus. As to the placenta if it could be easily removed, let it be removed at once; if adherent and not removable without too much force, let the tampon be used and ergot given for several days; if that was not sufficient, then dilate the os and remove placenta, using disinfectants afterwards. Dr. Fitch always first makes an examination and inspects the discharges to know whether the ovum or placenta, or both, have been discharged. If flowing is slight and os undilated, enjoin rest, empty the bowels and give an opiate. If flowing is profuse, and os undilated, use tampon and ergot; if os is dilatable, dilate with finger and remove ovum with finger or hook or forceps if you can feel it; but if you cannot reach any part of the ovum with your finger, do not work in the dark, fishing for it with instruments, but give ergot and let the uterus alone.

The discussion which followed revealed the fact that in regard to the use of anæsthesia in labor cases and in regard to the man-

agement of abortion, there exists as much diversity of opinion among western practitioners, as among their eastern brethren. But the hæmostatic effect of hot water injections was confirmed by every one who had tried them.

The committee appointed at a previous meeting to confer with the Society of Physicians and Surgeons regarding a union of the two societies, reported that a conference was held which resulted in making to both societies the following propositions: The Chicago Medical Society shall hold its meetings at a central locality; the members of the society of Physicians and Surgeons not already members of the Chicago Medical Society shall become members of the latter society without initiation fee; reorganization of the working plan of the society.

A very animated debate took place; but final action on these propositions was deferred.

THERE are two different states found in women where iron is either totally contra-indicated or to be given with great caution. The first is a condition of amenorrhœa in florid, plethoric persons. The other is the opposite condition of menorrhagia in certain females. There are cases of menorrhagia associated with pallor and debility, where the usual compound of iron and extract of ergot is not so useful as a non-chalybeate treatment. In these cases it is not any imperfection in the process of blood manufacture which is to be remedied, for the blood is made rapidly and quickly, only to be lost at each menstrual period. It is here desirable rather to limit the rapidity of the blood formation, so that when the several vascular turgescence of the menstrual period comes, it will not find the blood vessels too distended with blood. This will lead to diminished catamenial loss, and so the blood waste will be economised. According to the experience of Dr. Brown Séquard and Dr. Hughlings Jackson, iron does not suit epileptics. It increases the tendency to fits. It may improve the general condition, but it aggravates the epilepsy.—*Dublin Medical Press*, Oct. 3.

Correspondence.

Mr. Editor:—I notice in the January number of the JOURNAL AND EXAMINER a case of ovariotomy reported by Dr. E. R. Willard, of this city, as having occurred in *his* private practice. Now I wish to make some corrections in regard to the case. In the first place, the case belonged to me, and has been under my care since April 25, 1875, to this date, and Dr. Willard did *not see* or *treat* the case from that date until about October 20, 1877, when I invited him to visit the case with me and examine it with reference to an operation. The lady visited Dr. A. W. Heise with me on May 26, 1876, who advised her, at that time, to let it alone. About August 20, 1877, she again visited Dr. Heise, who advised paracentesis, which was performed by me as stated by Dr. W., on August 28, and September 30, 1877. On October 26, 1877, I performed the operation of ovariotomy, *assisted* by Dr. E. R. Willard and his son G. E. Willard. Dr. W. seems to have been in great haste to report the case, and whether intentionally or not, to claim all the honors. I desire to call the attention of the readers of his statement to a full report of the case, which will soon appear in the *Philadelphia Medical and Surgical Reporter*.

D. J. MERRIMAN, M. D.

WILMINGTON, ILL., Feb. 13, 1878.

[We are pleased to furnish the opportunity of correcting the apparent error, to which attention is directed in the above communication, and must adhere to our rule by declining to print any further communication on the same subject, in order to avoid a controversy in which the mass of our readers are not interested. —ED.]

NOTES ON GYNÆCOLOGY AND GYNÆCOLOGISTS ABROAD.

(*From our Foreign Correspondent.*)

VIENNA, February 26, 1878.

After more than twenty years spent in active practice, I have come abroad with, I hope, few deeply rooted prejudices of my own, and with a desire to impartially observe the treatment of disease by the best men in Europe, in the hope of receiving benefit from what I shall see and hear.

On account of the many conflicting opinions which I have found entertained by these great lights in our profession, and more especially in that branch of our art which I have named as the title of my letter, I have more than once envied that man, who being deeply grounded in some particular medical faith, hobby or theory, is able to look down with an eye of profound commiseration on all who are outside of the pale of his contracted mental horizon. These conflicting views pertain not only to the treatment, but to the nature and pathology of uterine diseases.

One gynæcologist, for example, exhibits a case of chronic corporeal metritis, the length of the body of the womb and the character of the discharge, all combining to render such a diagnosis as clear to him as the sunlight in heaven.

Another decides that this identical pathological condition is due to endometritis, stoutly maintaining that chronic metritis proper, is as rare an affection according to his observations, as elephantiasis in Lapland.

Still another calls attention as he looks through the speculum, to a typical case of ulceration of the cervix, which his neighbor calls a simple erosion and so on, ad infinitum.

In treatment the best authorities are no less at variance. One uses with impunity, instruments and medication, that another not only disapproves of, but considers dangerous to life.

The first gynæcologist of note whom I interviewed after land-

ing in Europe, was Dr. Athill, of Dublin, whom it is unnecessary for me to introduce to the intelligent reader of this journal.

After the simple presentation of my card, he received me with that warm hospitality so characteristic of the cultivated Irishman.

He is a little spare built, dark complexioned man, apparently about forty-five years of age, and as full of energy and life as Barnum in his palmiest days.

His local treatment of what Dr. Thomas calls glandular erosion of the cervix, is an application of two parts of carbolic acid and one part of alcohol.

He makes these applications once or twice a week, irrigating the parts twice a day freely with warm or tepid water.

This process of irrigation of the mouth of the womb, is rendered more efficient, as well as greatly simplified, by using the bed pan which Dr. Athill has constructed, and which is illustrated in the last edition of his very excellent little work on uterine diseases.

He is very emphatic in his condemnation of the use *locally*, of the preparations of iron and other powerful astringents to the womb, on account, as he thinks, of their liability to obstruct the circulation in the parts, producing thrombi, and the secondary train of evil consequences that are likely to follow. Showing me a case that was typical of what many American gynæcologists recognize as a laceration of the muscular fibers of the cervix, and treat by paring the edges of the flaps and bringing them together with sutures, I asked Dr. Athill what he thought of the procedure, and if he had ever tried it. His reply was, that although American physicians had done much to advance gynæcology, that just now, following in the wake of Dr. Sims, we were a little crazy on this subject of uterine surgery, and when a case presented itself we lost sight of every therapeutical appliance except the knife.

The position that Dr. Athill holds as master of the Rotunda is one of the best in Great Britain. The fund left to pay the master, by the founder of this great charity, now amounts, I believe, to $40,000 per year.

The gynæcological department is a new feature in this institu-

tion, but one that is being rapidly enlarged through the energy of Dr. Athill.

Professor Alexander Simpson, of Edinburgh, is a nephew of the world-renowned Sir James Simpson, and is a good example of what energy and hard work will develop, even where original talent was not perhaps of the highest order.

He came to this city as a poor boy, studied medicine with his uncle, and now occupies the position that Sir James had hoped to hand down to one of his own sons—but instead of that, one of them is an attorney with few clients, and the other is a spendthrift, who lives mostly on the Continent, and leads a life, if report be true, not calculated to shed lustre upon the name he has inherited.

Prof. Simpson did not strike me as a man who would ever extend our knowledge of gynæcology by original investigation; he seems to be content to follow in the footsteps of his distinguished uncle. He is a skillful operator, very tender and humane toward his patients, and greatly esteemed in society for his many worthy traits of character.

Prof. Matthews Duncan is in many respects the opposite of Prof. Simpson. He is rough and austere in his treatment of his hospital patients, and there seems to be but little cordiality between him and his medical class. He seemed inclined to attribute most uterine diseases to pathological changes in the os and cervix, and to treat them mainly by the application of pure nitrate of silver. Seeing many cases of uterine fibroid tumors in his wards, I asked the doctor what had been his experience in the use of ergotine hypodermically in the treatment of this affection. He said that he had tried it but it had done no good at all. I have been much interested on this point, and have repeated the same question to all the promenent men whom I have met and find none of them have any faith in the remedy. Prof. Simpson is the only man whom I saw using it.

Prof. Duncan is the most thorough skeptic as to the therapeutic value of drugs of any physician I have met. In his wards were a number of cases of well-marked chlorosis. Noticing that no medicine was given them, I asked, "Professor, do you not use iron in chlorosis?" His reply was, "*I never give iron*; it is one

of the delusions of medicine. We laugh at the infinitesimal dogmas of homeopathy, and yet nine hundred and ninety-nine out of every thousand of old-school physicians go on from year to year giving iron on a purely chemical theory, with not a whit of evidence in support of its virtues as a remedial agent."

He keeps his patients suffering from this disease quietly in bed, feeds them well, has the wards well ventilated, but ignores completely the value of medicines. During the last summer Prof. Duncan has been appointed to a professorship at St. Bartholomew's, in London, and as he and his friends have always felt that young Simpson's appointment to the chief professorship in the University of Edinburgh, was an injustice to him, his removal from here will greatly add to the harmony of this faculty.

Prof. Barnes, of London, is a typical "John Bull," large in frame, with a red face and nose that would seem to indicate free indulgence on the part of its possessor in a generous diet of beef and beer. For chronic endo-metritis his favorite local treatment is the tincture of iodine. If there coexists an involvement of the cervix, he applies to this part the nitrate of silver; but if either of the above diseased conditions is complicated with any marked displacement of the womb, he usually applies a pessary with a view to remedying this before instituting any local treatment. He usually employs some modification of the Hodge pessary, applying it to his charity patients who have often to walk a long distance to their homes; a procedure which he claims to be perfectly safe if you are only sure that your instrument is accurately fitted.

M. Guérin, of Paris, the great cotton man in surgery, has utilized this agent in the management of his gynæcological patients. He treats his cases of chronic ulceration and erosion of the os uteri, by cotton pessaries made in a conical form with a depression in the smaller end, which he fills with an astringent ointment of either tannin or one of the salts of iron. He applies this directly to the parts through a speculum, keeps his patient quietly in bed for some weeks, and his results, so far as a temporary healing of the parts is concerned, are very good indeed. The pessaries are changed once or twice in the twenty-four hours, depending upon the amount and character of the discharge.

I asked the doctor if these patients were not subject to relapses after resuming their ordinary avocations.

He answered that they would not if they remained under treatment long enough, that is from one to two months.

M. Guérin uses thick layers of cotton batting for all surgical dressings, to fulfill the same indications for which Mr. Lister employs his antiseptic gauze; and I will so far digress from my subject as to urge upon the reader, the adoption of his mode of treating severe burns.

The plan pursued is to apply freely to the burned surface a mixture of olive oil and lime water, and then envelop the parts in a thick layer of cotton batting, over which is applied a well fitting bandage. The first dressing is left on for from twenty-four to forty-eight hours, and then re-applied. After from six to ten days, the lime water and olive oil dressing is changed, and in its stead is used either an oxide of zinc or mild astringent ointment, according to the amount of the discharge and the condition of the wound.

The batting should be of the best quality, and the layer applied should be from 6 to 8 inches thick before the bandage is put on.

M. Guérin claims that by totally excluding the atmospheric air during the process of healing, the development of cicatricial tissue, which often proves such a source of evil in extensive burns, is greatly diminished.

I have seen patients brought into the Hôtel Dieu with extensive burns, suffering the most intense agony, in whose cases the relief from pain after applications of this dressing, was always immediate and permanent.

Professor Spaeth, of Vienna, is the best extemporaneous lecturer I have heard in this city.

His lectures are systematic in character, and include midwifery and the diseases immediately connected with the puerperal state.

Neither he nor Professor Karl Braun, ever allow any ergot to be given to a woman in child-bed before the expulsion of the fœtus, believing that the remedy acts toxicologically upon the unborn child, greatly endangering its life.

For puerperal convulsions he uses opium and chloral. Still, after reviewing the different modes of treatment that have been

adopted in this century, he avers that statistics in Vienna show them all to have been equally efficacious, and as they had been so varied, he is more than suspicious that they were all equally *worthless.*

On January 25th, 1878, Professor Spaeth read a paper before the "Gesellschaft der Aerzte" of Vienna, on the subject of the Cæsarean section.

He said, in the course of his remarks, that in the numerous instances where this operation had been done in Vienna during the century, only two patients had recovered, one of whom he brought before the society, in whose case he had himself operated.

Professor Karl Braun's course is mainly clinical in character, and is attended mostly by physicians and advanced medical students.

He is a large indolent appearing man, weighing perhaps 250 lbs., and greatly resembling "Boss" Tweed. He sits in his easy chair, talks in a most deliberate, and often hesitating manner, and whenever he is at a loss for a word to complete a sentence, he says, "Nun meine Herren," which an inquisitive Yankee listener says he repeated eighty times in one hour. Professor Braun is a man of powerful intellect, undoubtedly standing at the head of the profession in his department in South Germany. Like Billroth of this city, and Langenbeck of Berlin, he operates with a boldness far exceeding anything I have ever seen in America.

The removal of the cervix uteri by the galvano-cautery, for malignant disease of the parts, is a procedure that Professor Billroth resorts to constantly. He claims that this operation has been very successful in his hands, and when early and efficiently performed, the disease is not likely to recur.

In operating he removes all diseased tissue, regardless of the integrity of surrounding parts.

There is a patient in the hospital now, apparently well, into whose peritoneal cavity he opened when removing a cancer of the cervix; and fistulous openings into the bladder after his operations, are not infrequent.

His mode of amputating the cervix, where there is simply an

abnormal elongation of that part of the uterus, seems to me to be both simple and safe. He passes a straight needle armed with a double wire suture through the centre of the cervix, about one half inch above where he proposes to amputate. He then ties each one of these sutures firmly around each transfixed position of the cervix, so as to effectually cut off all circulation from the parts below. He next amputates the cervix with a scalpel, cutting half way through the parts from above downward, and the other half from below upward, the incisions being carried in each case, slightly from without inward, making a partial flap of mucous membrane to assist in covering the stump. The parts are then brought together by deep wire sutures, after which the first ligatures, passed in higher up to control the hemorrhage, are removed.

His cases, this winter, have all done excellently, and the bleeding has been insignificant.

I saw him operate on a woman, the third of three sisters who were sterile from an elongation of the cervix, and, as a similar procedure had remedied this condition in the first two, the third had applied to be treated in the same manner.

Professor Braun treats most of his cases of endometritis by first scraping out the entire intra-uterine surface with a sharp, spoon-shaped curette, and then injecting the womb with the liquor ferri chloridi.

The instrument that he uses, is a large hypodermic syringe, attached to the end of which is a hard rubber tube about the size of a No. 6 catheter, nine inches in length, slightly curved near its upper extremity, where it is perforated on the sides by a number of small apertures.

The quantity of the fluid used should vary from 15 to 30 m., according to the size of the uterine cavity.

The instrument is carried at first up to the fundus, and the fluid is slowly thrown in as it is being gradually withdrawn, so that by the time the fluid has all been injected from the syringe, the end of the instrument has nearly reached the external os.

The tube is now passed again slowly back to the fundus, and as this is being done, all fluid is again drawn into it, when the operation is completed.

His results in the treatment of some of his cases are very brilliant indeed.

To give a single example:

A woman about 30 years of age, unmarried and previously in good health, fell from a distance alighting upon her feet, and although no marked displacement of the uterus followed the accident, she complained ever aftewards of an uneasy and painful sensation about her pelvis, and had flooded nearly constantly from that time until she was brought to the hospital, a period of three months. The plan of treatment above described was carried out in her case and, although she was so weak from the loss of blood when the operation was done, that she could remain in the upright position but a few moments at a time, at the end of a month she went out entirely restored to health.

Although it may be "telling tales out of school," I will relate two cases that have resulted fatally during the present winter, by an error in diagnosis on the part of Prof. Braun.

The first was a case of extra-uterine fibroid as large as a child's head, occupying one iliac fossa. In the other iliac fossa extending to the median line, was another tumor of about equal size that fluctuated upon being percussed.

Prof. Braun, in lecturing on this case said: "Gentlemen, we have here evidently to deal with two tumors, one a cyst, and the other solid; and to further verify our diagnosis it is necessary to ascertain the nature of the contents of this cyst, and with that view I will tap it and draw off a portion of its contents.

Twenty-four hours later, the patient lay a corpse on the table in Prof. Heschl's pathological room. He had tapped a distended and displaced bladder and the patient had rapidly succumbed to peritonitis. The other was a girl, about eighteen years of age, who had never menstrated, though of late she had a slight discharge from the vagina. She complained of great pain in the region of the sacrum, and had latterly suffered considerably in evacuating her bowels. Prof. Braun first attempted a vaginal examination but finding the parts small, and the girl sensitive, introduced his finger into the rectum when he discovered a large tumor, situated as he said, behind the upper walls of the vagina and extending into the cul-de-sac of Douglas. This tumor

he concluded was an hæmatocele. To verify this diagnosis he introduced a large sized exploring trochar into it, per rectum.

No fluid making its appearance, he then applied the aspirator to his trochar. Still getting no liquid, he concluded that he was not high enough up, and pushed his instrument still further on. Three days later we had this patient on the table in the dead room.

The post mortem showed that she had a complete atresia of the superior portion of the vagina. The menstrual blood that had escaped from the womb had distended the upper walls of the vagina to an enormous extent. This blood was too thick to pass through the trochar, and when Prof. Braun had pushed his instrument further on, he had punctured the bladder; the urine had infiltrated into the cellular tissue behind the womb, as well as into this artificial sac, setting up a violent cellulitis, followed by a peritonitis, of which the unfortunate girl had died.

Dr. Chiari, who made the post mortems in these cases, very properly remarked that "When so great an authority as Prof. Braun can be so easily mistaken as to the nature of diseases connected with the female generative organs, it certainly behooves men of less ability and experience to be modest in enunciating their opinions, and careful about resorting to any expedient that may prove dangerous to life."

There have been 3,300 women delivered in Prof. B.'s lying-in wards alone during the past year. Of these 29 have died in child-bed. Only one has died of post partum hemorrhage, and one from rupture of the uterus. Nine in all have died of diseases peculiar to the puerperal state; the others dying of diseases that had existed prior to confinement.

The doctor is a thorough believer in the communicability of puerperal fever, of which we have had an outbreak here this winter. During its prevalence all students were excluded from the examination of pregnant women, the lying-in wards were abandoned, thoroughly cleansed and re-calcimined. In three weeks the disease was eliminated from the hospital.

The careful post mortem examinations made here, on all women who die of acute puerperal processes, whether of an epidemic or sporadic character, whether eventuating in peritonitis, uterine

phlebitis, or general septicæmia, seem to show that these affections take their origin in inflammatory and septic changes within the body of the womb itself. In view of this fact, both Professors Braun and Spaeth treat all these cases by a thorough drainage and cleansing of the intra-uterine surface.

Whenever the discharges in a puerperal case, by their odor or otherwise, indicate that they are becoming septic in character, the womb is thoroughly washed out with a 2 per cent. solution of carbolic acid.

The injections are made through a No. 12 English male elastic catheter, and this catheter is left constantly in the womb to act as a drainage tube, being removed, well cleansed and the injection repeated once in from eight to twelve hours.

W. S. CALDWELL.

ACCORDING to a statement in the Academy two healthy men allowed their limbs to be coated with impermeable plasters while the trunk was varnished with several layers of flexible collodium, which were allowed to remain for a week. None of the evil consequences observed in animals, made their appearance; there was no fall of temperature, no albuminuria, no exhaustion, no dyspnœa, convulsion or paralysis.

THE doctors of Havre have united and issued a circular to their patients threatening a general "strike" unless their terms are complied with. From $2,00 to $4.00 for night and urgent visits is the price demanded.

DR. JAMES NEVINS HYDE will hold a special clinique for cutaneous and venereal diseases at Rush Medical College, every Monday throughout the year, at 2½ p. m., commencing with the 1st inst.

DR. R. L. REA has been recently appointed Professor of Anatomy in the Chicago Medical College.

Reviews and Book Notices.

PRACTICAL GYNÆCOLOGY: A Handbook of the diseases of Women. By Heywood Smith, M. A., M. D., Oxon. With Illustrations. Philadelphia: Lindsay & Blakiston. 1878.

The author of this volume states in the preface that his "object in the present work has been to present the busy practitioner with a book systematically arranged, burdened with no discussions on vexed questions of pathology, and giving at a glance the salient points of diagnosis and treatment with clearness and brevity." In all these respects he has fully succeeded; and, although the book is a small octavo of only 205 pages, he has managed, after devoting 21 pages to a description of the means and methods of making abdominal and pelvic examinations, 15 to a Table of Contents and 14 to an Appendix of Remedies and an Index, to consider the causes, symptoms, signs, diagnosis, prognosis and treatment of 108 different diseases. Of course, such a result could only be accomplished by a vigorous application of the "boiling down" process. There is probably not a redundant word in the book. As examples of the author's condensing ability, it may be stated that he disposes of the subject of Menorrhagia in less than a single page, and of Dysmenorrhea in all its varieties, in one page and a half!

The systematic arrangement of the book is admirable, and might be profitably followed by some of the larger and more pretentious works on diseases of women. Chapter I. is given to the Means of Diagnosis; chapter II., to General Diseases, or those of constitutional character, including Syphilis, Cancer and Phthisis; chapter III., to Diseases of the Ovary; chapter IV., Diseases of the Oviduct; chapter V., Diseases of the Broad

Ligaments; chapter VI., Diseases of the Unimpregnated Uterus; chapter VII., Diseases of the Vagina; chapter VIII., Diseases of the Vulva; chapter IX., Diseases of the Mamma; chapter X., Functional Diseases; chapter XI., Diseases Connected with Pregnancy; chapter XII., Diseases Connected with Parturition; chapter XIII., Diseases Consequent on Parturition.

Our author deserves our thanks for giving us a much-needed word, "Spammenorrhea," to express scantiness of the menstrual flow, as distinguished from its absence, both these conditions having been heretofore included in the term Amenorrhea, a word clearly applicable only to those cases in which there is no menstrual secretion.

On the mooted question, Dilatation *vs.* Incision, in the treatment of stricture of the cervical canal, at whatever point the constriction may be, Dr. Smith is in favor of the knife; and states his preference for the single-bladed hysterotome. He advises that the incisions should not be deep, and that they should be followed immediately by forcible dilatation.

It is a significant sign of the tendency of surgical opinion in regard to large uterine fibroids, that our author, speaking of the subperitoneal variety gives, under the head of Treatment, only one sentence, "where so large as to threaten health, removal by abdominal section." Likewise, he says, in reference to intra-uterine fibroids which for any reason cannot be successfully dealt with by other means, and where the presence of either pain, hemorrhage or rapid growth renders the patient's life unendurable or prevents her from pursuing her necessary avocations, that the total extirpation of the uterus and its morbid contents is advisable; providing only, that a more or less healthy cervix can be left as a stump, as the attempted removal of the cervix also would be attended with too great risk, owing to its relation with the bladder. And he draws attention to the fact that, although the operation of hysterectomy (he prefers this word to "hysterotomy" and "gastrotomy," as being more accurate, just as, for the same reason, he advises "ovariectomy" instead of "ovariotomy") is perhaps the most formidable in uterine surgery, the mortality after removal of the uterus is not greater than obtained in the early history of ovariotomy.

Two conditions are pointed out in which the author regards the process of "produced sloughing" as applicable to the treatment of intra-uterine fibroids; "one where the tumor is sessile and presents considerable difficulties to the process of enucleation, and the other where the uterus is so enlarged and misplaced by a tumor which may be mainly interstitial, as that the os uteri is tilted upward and jammed against or above the os pubis. In the former case, it is suggested to bore a deep hole into the most depending portion of the tumor through the os uteri by either the actual cautery or potassa fusa, opening thereby the capsule of the tumor. In the latter, it is recommended to, in fact, bore a new os uteri, as it were, by the actual cautery in the most dependent portion (the posterior) of the uterus itself. It has been successfully carried out; the tumor sloughing and disintegrating has been expelled gradually through the artificial os, and as the tumor thus becomes lessened, the uterus assumes its natural position, the os comes down from its former situation, and the hole through which the tumor has sloughed out eventually heals up."

For the reversion of the chronically inverted uterus, Dr. Smith gives decided preference to the plan of Dr. Noeggerath, of New York, which consists in feeling for the insertion of one of the oviducts and making steady pressure upon the spot with a finger, counter-pressure being at the same time made on the outside, or occasionally by pressing the uterus against the promontory of the sacrum. He regards this as by far the most scientific method of procedure, because the uterine walls are thinner in this situation than at any other point, and because, also "as the insertion of the oviduct is situated laterally, any gain of reversion is first made in that portion that intervenes between the insertion of the oviduct and the cervix; and the reinvagination of the cervix once having been begun, steady pressure will soon carry the whole of the organ upward in an oblique direction."

On the whole, the book is a good one, but who wants it? Even the busy practitioner, for whose needs it has been especially written, when desirous of referring to a particular subject, always prefers a full reference to a scanty one; so that if he had the

work before us, he would still need the larger work of Thomas, or Hewitt or Barnes; and if he were in possession of either of these he would surely have no need for this "Handbook."

We cannot help thinking that in his desire to do justice to his father, Dr. Protherae Smith, and to show his filial regard, our author has somewhat overstepped the bounds of propriety. The book is dedicated to his father, and with this we find no fault; but, in addition to this, there are in the body of the work no less than ten allusions to "my father" and his superior instruments, apparatus and plans of procedure. Of course, this may be considered only a matter of taste, but it seems to us to be not one of good taste.

A. R. J.

DISEASES OF THE NASAL CAVITY AND THE VAULT OF THE PHARYNX. Translated from the German of Dr. Carl Michel, of Cologne, on the Rhine. First American edition. Detroit, Michigan: C. Jung, 1877; pp. 109.

This pamphlet is not a complete treatise on the diseases of the nose, but an exposition of the author's views and methods of treatment as they have been formulated during a long practice. In the first place, he emphatically insists upon a thorough examation and justly denounces the slip-shod manner in which nasal affections generally are disposed of by physicians. The nasal cavity permit of an inspection of most of its parts as well as other cavities, and their diseases can successfully be treated only by local treatment under the guide of proper specula and good light. The treatment of chronic nasal catarrh by galvanocautery is considered by Michel superior to any other. He believes ozæna is a chronic purulent inflammation of the sphenoidal and ethmoidal cells, and fortifies his view by very plausible reasons.

This brochure was published in 1876; it was printed on inferior paper and presented in a very unfinished dress like all the continental pamphlets and periodicals. In this respect the American edition is far superior to its original. And this is all we have to say in its favor. It is a very unpleasant duty to condemn; but in justice to the author we are compelled to say

that the translation is a very unskillful and awkward reproduction of the original. The translator is utterly incapable of doing the work well, for two reasons, viz., he cannot construct a grammatically correct English sentence, and has no knowledge of medical matters. Every paragraph in the translation is an offense against English grammar; every page contains violations of orthography; every chapter is rendered unintelligible by the wrong application of words which convey a meaning different from that which Dr. Michel expressed in his original article.

The justice of this criticism may be estimated by a consideration of the following instances, selected from a large number of sentences: Page 19, "If the stage of muco-purulent secretion does not stop otherwise, then insufflations of nitrate of silver one part to twenty of talc., which is done by means of a strong glass pipette, one end of which is cut out shovel-like, so that the powder may be easily taken up—while the other end is curved so that the insufflation can be accomplished from through the mouth." We confess we had to consult the German text to understand this.

On page 15, we read *glandular bed* for *Drüsenlager* (a layer of glands); page 17 *tumor* for *Geschwür* (ulcer); page 30, *bluestone* for *Höllenstein* (solid silver nitrate); page 41, *cavities of the septum* for *Siebbeinhöhlen*, (ethmoidal cells); page 46, *spray* for *Spritze* (syringe); page 35, an *odorous* nose for *Stinknase* (fetid nose)! And on page 80 where Dr. Michel wishes to say that mercurial ointment (unguentum cinereum) should be used, the translator speaks of "embrocations of ciner salve (*ungt. ciner*—ash-ointment)"!

We are exceedingly sorry that we find so little to praise and so much to censure. But to make the translation intelligible it must be revised and re-written. F. C. H.

HANDBOOK OF THE PRACTICE OF MEDICINE. By M. Charteris, M. D., Professor of Practice of Medicine, Anderson's College, Glasgow; and Physician and Lecturer in Clinical Medicine, Glasgow Royal Infirmary. Philadelphia: Lindsay & Blakiston, 1878; pp., 225. Chicago: Jansen, McClurg & Co. Price $2.

This compendium is chiefly devoted to the symptoms, pathology

and treatment of those diseases that most frequently engage the attention of the practitioner. The work reveals its author as a physician of large attainments and experience, and possessing the rare capacity of briefly stating what is most essential to be known, relating to the different subjects of which he treats. The book will be valuable to students—for whose use it is especially designed—as it clearly outlines to them interesting subjects of investigation; and to physicians also, by refreshing their memories on points to which they may not for some time have given especial study.

The book contains a number of pages of formulæ; and a number of illustrations—one of especial excellence as explaining cardiac murmurs and the valvular action of the heart.

BOOKS AND PAMPHLETS RECEIVED.

A Manual of Nursing; prepared for the Training School for Nurses attached to Bellevue Hospital. New York: G. P. Putnam's Sons. 1878. 12 mo.; flexible cloth, pp. 143. Price $1.00.

St. Bartholomew's Hospital Reports. Edited by W. S. Church, M. D., and Alfred Wallett, F. R. C. S. Vol. XIII. London: Smith, Elder & Co. 1877. 8vo.; cloth, pp. 354.

A Practical Manual of the Diseases of Children, with a Formulary. By Edward Ellis, M. D., etc. Third edition. Philadelphia: Lindsay & Blakiston. 1878. 8vo.; cloth, pp. 385. Price $2.50.

Injuries to the Eye and their Medico-Legal Aspect. By Ferdinand von Arlt, M. D., etc. Translated, with the permission of the author, by Chas. S. Turnbull, M. D., etc. Philadelphia: Claxton, Remsen & Haffelfinger. 1878. 8vo.; cloth, pp. 198.

Cerebral Hyperæmia the Result of Mental Strain or Emotional Disturbance. By William A. Hammond, M. D., etc. Read before the New York Neurological Society (in outline), Nov. 5th, 1877. New York: G. P. Putnam's Sons. 1878. 12mo.; flexible cloth, pp. 108. Price $1.00.

What Am I? A Valedictory Address to the Graduates, delivered at the close of the Forty-first Session of the Medical Department of the University of Louisville, Feb. 28, 1878. By J. M. Bodine, M. D., etc. Published by request.

Are Eczema and Psoriasis Local Diseases of the Skin, or are they Manifestations of Constitutional Disorders? By L. Duncan Bulkley, A. M., M. D. Ext. Trans. International Med. Congress. Phila., Sept., 1876.

On the Recognition and Management of the Gouty State of Diseases of the Skin. By L. Duncan Bulkley, A. M., M. D. Reprint *Amer. Practitioner* Nov., 1877.

On the So-called Eczema Marginatum of Hebra (Tinea Circinata Cruris) as observed in America. A Clinical Study. By L. Duncan Bulkley, A. M., M. D. Read at the first annual meeting of the American Dermatological Association, Niagara Falls, Sept. 4, 1877. Reprint from the CHICAGO MEDICAL JOURNAL AND EXAMINER, Nov., 1877.

Bathing, Cupping, Electricity, Massage. A Comparison of the Therapeutic Effects of Bathing, or Cupping, or Atmospheric Exhaustion of Electricity in the Form of Galvanism and Faradism, and of Massage, in the Treatment of Debilities, Deformaties and Chronic Disease. By David Prince, M. D., of Jacksonville, Ill. Reprint *Amer. Pract.*, Feb., 1878.

Surgical Uses, other than Hæmostatic of the Strong Elastic Bandage. By Henry A. Martin, M. D., etc. Reprint from the transactions of the Amer. Med. Ass'n. for 1877.

Report on Heating and Ventilation. Prepared for the Trustees of the Johns Hopkins Hospital, Baltimore, Md. By John S. Billings, Surgeon U. S. A., 1878.

Report of the Department of Health of the City of Chicago for the year 1877.

BORAX AND NITRATE OF POTASSIUM IN SUDDEN HOARSENESS.—These two salts have been employed with advantage in cases of hoarseness and aphonia occurring suddenly from the action of cold ("La France Medicale"). The remedy is recommended to singers and orators whose voices suddenly become lost, but which by this means can be recovered almost instantly. A little piece of borax the size of a pea is to be slowly dissolved in the mouth ten minutes before singing or speaking; the remedy provokes an abundant secretion of saliva, which moistens the mouth and throat. This local action of borax should be aided by an equal dose of nitrate of potassium, taken in a warm solution before going to bed.—*Philadelphia Times.*

Summary.

Practical Medicine.

A Case of Thrombosis of one Coronary Artery. Dr. H. Hammer, of St. Louis. *Wiener Med. Wochenschrift*, Feb. 2, 1878).

The patient, a robust man of 34 years, had had various attacks of rheumatism since a year, and was at the time recovering from a severe attack. No valvular lesion existed. While he was sitting in a chair, collapse set in suddenly at one o'clock at noon. Called in consultation Dr. H., found him the next morning in collapse, but with undisturbed mind, pallor, cyanotic coloration of the skin and clammy sweat but *no* dyspnœa, cough or pain. Respirations 24 and pulse eight beats per minute. Percussion of lungs and heart and auscultation of lungs essentially negative. On listening to the cardiac sounds, the feeble but pure systolic and diastolic sounds were heard; each cardiac contraction lasting about a second, was followed by a vibrating sound of five seconds duration, referable to clonic spasm of the heart; after two seconds of absolute rest the cycle was repeated.

The sudden collapse, the cardiac symptoms and the absence of other causes induced Dr. Hammer to state the anti-mortem diagnosis as occlusion of one coronary artery—the first diagnosis of its kind. Death occurred after 19 hours.

The heart was found normal; of the valves, one, the posterior fold of the aortic semilunar valve, was altered. There were adhesions between it and the wall of the aorta and it was surrounded with endocarditic excrescences from which a clot extended into the right sinus valsavæ and thence down into the coronary artery.

SURGERY.

ANTISEPTIC INJECTIONS INTO JOINTS.—Dr. Fr. Rinne (*Centralbl. f. Chirurgie*, 1877, No. 49 and 50). The writer gives an account of 19 cases of the various forms of inflamed knee joints which were treated in this way: The skin of the knee having been thoroughly cleansed and shaved and washed with carbolic acid, while the carbolic spray is playing on it a large well-disinfected trocar is thrust into the joint. As soon as the free motions of the point of the trocar indicate that it has entered the articular cavity the stylet is withdrawn, and the contents of the joint are allowed to flow from the canula. Pressure by the hands upon the sides of the joint often facilitates the withdrawal of the fluid, if it is thick or mixed with clots of fibrine or blood. When the flow ceases, the articular cavity is filled to its utmost capacity with a watery solution of carbolic acid (3 to 5 per cent.). During this process flexion and extension of the joint is practiced, in order to drive the lotion into all the pouches and recesses, and to dislodge what coagula there may be in them. Then the acid is drawn off and the joint filled again; and so the filling is repeated, until the carbolic acid returns perfectly clear and without a trace of pus, blood or fibrine. The canula removed, the punctured wound is dressed with silk protective, and the whole knee covered with Lister's bandage. The leg thus dressed, is put upon a splint and left undisturbed the next 5 or 6 days. But the bandage must not be applied very tightly, for the injections of the acid are expected to produce an acute synovitis, which often is followed by an acute exudation into and a swelling of the joint. Now, if the bandage is tight, it will occasion much pain and necessitate a change of the dressing. The treatment after the sixth day depends entirely on the amount of reaction found in the joint. If there is no exudation or inflammation in the joint, slight pressure is exerted upon it with elastic bandage for two days, and then the patient is allowed to walk with the leg stiffened by a splint. If also then the exudation does not return, moderate movements of the joints are tried; and in two weeks the patient can be discharged cured. But, if on the sixth day, when the bandage is removed, the joint it found

distended by acute exudation, rest and compression by elastic bandages must be continued until this reaction has disappeared, to be followed by the same treatment as mentioned before.

By his clinical observations, Dr. R. is lead to believe that the following affections can be cured, or at least benefited, by the antiseptic injections: 1. Acute synovitis, with so large an exudation that the capsule is likely to break. 2. Sub-acute and chronic serous exudation. 3. The mixed forms of exudation—sero-purulent. 4. The traumatic hæmarthrosis.

THORACENTESIS BY ASPIRATION IN ACUTE PLEURISY.—Dieulafoy. (*Lyon Médical*, Dec. 16, 1877.) M. Dieulafoy gives the following *résumé* of the different papers which he has just published in the *Gazette Hebdomadaire.*

Aspiration in acute pleurisy is a simple operation, and absolutely inoffensive; it should be practiced with the needle No. 2, and the quantity of liquid withdrawn at a single sitting, should not exceed a thousand grammes (about a quart).

The accidents attributed to the operation are of different natures, and may be grouped in three classes:

The accidents of the third class, the so-called transformation of a serous liquid into a purulent one, are not imputable to the thoracentesis, for I think I have demonstrated that in that case it is a *natural evolution* of legitimate purulent pleuresy, and in no wise a transformation of the liquid.

The accidents of the second class, syncope, asphyxia, hemiplegia, due to indiginous or migratory clots in the heart or pulmonary vessels, or occurring under the influence of other causes (pleuro-pulmonary gangrene, general state of the subject), should not be placed to the account of the operation, since they are observed in the course of pleurisy before as well as after the thoracentesis, and since they occur from the fact of there being pleuresy, not from the operation.

The accidents of the first class, acute œdema of the lung, pulmonary congestion with or without albuminous expectoration, are the only accidents directly and truly imputable to thoracentesis, but these it is easy to avoid. In collecting all the accidents of this kind together, I have seen that they are always associated

with either the immediate issue of a large quantity of fluid, or with complicated pleurisies; hence the precept to limit the quantity of fluid withdrawn at a sitting, and to proportion it to the complications of the pleurisy.

The method of operating being fixed and invariable, there is nothing variable but the indications of the thoracentesis, and these may be stated in two words: The thoracentesis is *urgent* or it is *debatable*. The urgency cannot and should not be based on anything but the estimation of the quantity of liquid effused; in all other cases it is debatable; it is subject to the appreciation of him who follows the course and the nature, an appreciation, so to speak, variable with each new case, for few diseases have such irregular and indecisive turns as accute pleuresy.

THERAPEUTICS.

ACTION OF CATHARTICS. Dr. L. Brieger. (*Arch. f. Exp. Path., &c., VIII, 4 and 5*, 1878.)

Beginning with a recapitulation of the present state of the question, the author thereupon details his experiments made in Cohnheim's labaratory. Dogs were kept without food for 2 or 3 days, and then narcotized with morphine. Their small intestines were exposed, a certain length of them isolated by two ligatures; the piece included was washed by an injection of water and thereupon emptied completely. It was next divided into three equal parts by the application of two more ligatures. Into the two peripheral parts the drug was injected with a hypodermic syringe; the central portion was used for comparison. The gut was returned into its cavity and the animal killed after the lapse of 4½ hours.

A. SALINE CATHARTICS.

I. A one per cent. solution of sulphate of magnesium was absorbed after injection without reaction.

II. An injection of 5 grammes of a 20 per cent. solution of the same agent caused a distension of ligatured intestine with an alkaline fluid, containing mucous flocculi soluble in liquor sodæ. This fluid changed starch into sugar, and digested raw fibrine,

but not boiled fibrine or albumen. Microscopically, it contained mucous corpuscles and epithelium. The mucous membrane was pale and normal.

III. Similar results were obtained from solutions of magnesic sulphate (50 per cent.), sodic sulphate (saturated sol.) and sodic chloride (saturated sol.) Two grammes (½ ʒ) of the latter gave rise to 13 grammes of exsudation.

B. DRASTICS.

Half a drop of croton oil (dissolved in 2,5 c. cm. ether) filled the gut with 18 grammes of sanguinolent fluid.

Ext. colocynth dissolved in two grm. water had the following effect:

0,02 grm. No exudation, mucous membrane reddened. 0,04, bloody fluid, inflammation. 0,05, distension with bloody fluid. 0,1, diphtheritic inflammation of the mucous membrane. These fluids possessed the same properties, as those produced by salines, and contained besides a large number of white and red corpuscles, epithelium, and flocculi of mucus and fibrine.

C. LAXATIVES.

Calomel, infus. sennæ, pulv. rhei, ext. aloes, ol. ricini, were injected in variable quantities. The gut, examined after four to seven hours, was found *simply* contracted, its surface pale. The water used as menstruum had been absorbed, the oil and the other agents remained unchanged.

The author deduces from these experiments, that salines act by causing both transudation into the intestine, and increased secretion of the intestinal glands (since the corresponding fluid possessed the physiological properties of intestinal juice). The effect of the laxatives of class c must be accounted for by their power of stimulating intestinal peristaltic movements, and hence hastening the passage of the ingesta before the fluid part can be absorbed. The drastics, on the other hand, may also stimulate peristalsis in weak doses, while in larger quantities they cause an inflammatory exudation and hypersecretion.—(*Allg. Med. Central Zeitung,* 1878. No. 10 and 11.)

THE USE OF HYDROBROMATE OF QUININE IN DISEASES OF CHILDREN. Dr. Steinitz of Breslau. (*Allg. Med. Central Zeitung.*)

The author has used the remedy in an extensively prevailing epidemic of hooping-cough, giving it generally in a mixture composed of three to five parts of the hydrobromate in one thousand of syrup, the dose being a teaspoonful every two hours. In no case was it necessary to use any other remedies. The hooping-cough had in twenty-three cases lasted on an average ten weeks, and in fifteen others twelve weeks ; and in the use of the remedy the paroxysms became in the course of a week less frequent and milder. No after-effects upon the alimentary canal were discovered. Three deaths occurred, all in very weak and scrofulous individuals, in whom other complications were present. Dr. Steinitz takes the opportunity of remarking that he prescribed in several cases the extract of castanea vesica, which has been extolled as a remedy, but without good results.

He also used the hydrobromate of quinine in cases of spasms of the glottis. Three of the patients died after only a few paroxysms. The remaining six recovered. The medicine was prescribed as stated above, and was borne well. In all the six cases the attacks diminished, at times varying from the third to the fifth week, in intensity as well as in frequency ; and the duration of the disease was in no case longer than from four to six months. This result is satisfactory when compared with the previous course of the disease under the use of other medicines, such as bromide of potassium, oxide of zinc, valerian, and musk, none of which could be borne for several months together.

Dr. Steinitz has also given the hydrobromate of quinine in the dental convulsions of children, but cannot as yet speak of its efficacy in this malady. He regards it, however, as deserving a trial.

A New Revulsive.—Conturier. (*L' Union Médicale*, 22d December, 1877.)

Among the usual medicines there are few which render as much service as revulsives. Sinapisms are of daily use, and flying blisters, although reserved for graver cases, have also numerous indications. But there are many circumstances where the transient action of the sinapism does not suffice, and where we hesitate before employing the blister. We have then no other recourse than frictions with tartar emetic or croton oil, and

applications of thapsia. But these means are attended by inconveniences so serious, that we often hesitate to advise them. Tartar emetic produces an eruption which heals slowly and leaves indelible traces; hence, it has been generally given up. Croton oil and thapsia occasion intolerable itching, lasting a long time, and besides, often a painful swelling and a general eruption, and their action is slow to produce. If still employed, it is for want of better. Burgundy pitch is almost useless.

What is required to answer the purpose is an agent whose action is at once rapid and prolonged, and which provokes a sharp revulsion, without pain or itching. Does this agent exist? It did not formerly, or at least its properties were scarcely known, and it was not employed; but it certainly will be in the future. This agent is *pimento*, or rather its extract, which has just been made known by M. Lardy. It unites in effect, in the highest degree, the diverse conditions which we have enumerated. It acts with great rapidity, ten to twenty minutes, according to point of application and delicacy of the skin. Its action from the first is manifested by heat, slight smarting and redness. These phenomena increase for about three hours, then remain stationary, and the revulsive action continues as long as desired. However, after twenty-four hours in adults, and eight or ten hours in children, it is best to remove the plaster, or put another in a new place if further revulsion is desired. The heat and smarting caused are not painful, and do not hinder the patient from his occupation. There is no itching, and the action always remains localized. It may well be compared to that of mustard arrived at the half of its power, and thus remaining for twenty-four hours.

It may be seen from this brief exposition, what part may be drawn from this new revulsive in cases where a rapid and prolonged derivation is necessary; acute or chronic inflammation of the bronchia or throat, congestions of various organs, rheumatic pains, neuralgia, etc.

The color of the extract is beautiful red, identical with that of the dried fruit; when properly incorporated with some plastic mass, and spread on squares of paper, its application is easy. It is not necessary to heat it, as it adheres readily. When the parts

are subjected to movements, it may be held in place by a bandage. Its action is augmented by pressure. After removal, if desired, the heat and smarting may be relieved immediately by application of starch. Care should be used not to get it in contact with the eyes, lips, or nose, on account of the smarting caused by it in those regions.

The author is sure that all who try the new revulsive will be satisfied with it, as he has been.

THERAPEUTICS OF TETANUS.—(*Dublin Med. Press.*) Anonymous. — *Chloroform* has had an extensive trial; it has been administered in large quantities, sometimes with apparent success. Simpson narcotised a child for thirteen consecutive days, using ℥ 100 with mercury. But the general result is that while all the fatal symptoms disappear on the inhalation of chloroform, they return on its removal with unabated violence, and the disease generally lands them to its fatal conclusion without delay. *Chloral hydrate* has now taken the place of chloroform in the treatment of tetanus, but without more success. There appears to be great tolerance of the drug, and a case is quoted of a child of 12½ years who took more than 100gr. a day. Dr. Ballantyne, of Dalkeith, gave ℥ iij, in twenty-four hours, and ℥ vj. in five weeks, with success, the patient during this time being easily aroused to speak. It seems, however, to be a valuable drug in alleviating the symptoms. Its injection into the veins and its subcutaneous injection have not been so successful. *Calabar bean*, which, like chloral, affects the spinal cord, and has little or no action on the motor and sensory nerves, has been recently much employed. As with other drugs, its administration has been at one time apparently successful, and at another a perfect failure. It has, moreover, to be given in comparatively large doses. The spasms are controlled and the body heat sinks, and if the drug be withheld the paroxysms return, while if it be pressed the patient comes into a somewhat dangerous condition. A large dose is required to produce by subcutaneous injection contraction of the pupil, sometimes as much as ⅓gr. every two hours. There is not much to be said in favor of either *opium* alone, or opium combined with chloral; while *nitrite of amyl*, *bromide of potassium*, and *conium* have been alike tried in vain. A more

avorable report is given of *aconite*, the exhibition of which has been attended in some cases with remakable results. It lowered the pulse, which fell in one case from 135 to 60, with a simultaneous decrease of the convulsions; but the effects of the drug constitute in themselves a new danger which must be carefully controlled. Tendency to syncope, wakefulness, vertigo, dilatation and insensibility of the pupil; small, intermittent, and irregular pulse, and increased irritability of the nervous system are often the result of giving this remedy. The writer of the article referred to, believes that such a summary as he has given makes an appeal to pathology to throw fresh light upon this disease, and he hopes that some combination of these agents will be able to accomplish what each one of them singly has been found unable to accomplish.

We have no doubt that we shall one day find a remedy that is as really successful in the treatment of tetanus as the bromide of potassium has been found to be in some forms of epilepsy; but just as we are not indebted to pathology for the discovery of the therapeutic virtues of the bromide in epilepsy, so we are far from being sanguine that pathology will point out by-and-by the drug or combination of drugs which will cure the disease under consideration. In all probability the chemist or the botanist has already provided the remedy; and perhaps it remains for empirical experiment, rather than for physiology or pathology, to find it out.

Obituary.

Lundsford Pitts Yandell, Sr.

It becomes our sad duty to record the death of Dr. L. P. Yandell, Sr. Known as he was personally to many of our readers, and by reputation to all, they will receive the announcement sorrowfully.

Dr. Yandell died upon the morning of February 4th, after a short illness with pneumonia. He was born July 4th, 1803, and

was consequently in his 75th year when he died. He was a native of Tennessee, born near Hartsville, Sumner county. He was the son of Dr. Wilson Yandell, a native of North Carolina, and an eminent practitioner in his day. Dr. Yandell attended his first course of lectures in the Transylvania University at Lexington, his second course in the University of Maryland at Baltimore, where he graduated in 1825. In 1831 he was called to the Chair of Chemistry in the Transylvania College, which position he held for six years, when (1837) he came to Louisville and assisted in the organization of the Medical Institute, which subsequently became the medical department of the University of Louisville. He filled at different times in this institution the chair of Chemistry, Materia Medica, and Physiology. Associated with him in the faculty of the University were Caldwell, Miller, Drake, Gross, Austin Flint, J. B. Flint, Cobb, Bartlett, and other celebrities in American Medicine. He continued in the University until 1858, when he removed to Memphis, Tenn., and for a year or so was professor of practice in a medical school which was attempted there. During the war he was for awhile in the hospital service of the Confederacy. In 1862 he was licensed to preach by the Memphis Presbytery, and for awhile was pastor of a church in Dyceton, Tenn. Returning to Louisville after the war, he has resided here ever since.—*Louisville Medical News*, February 9th, 1878.

Dr. Edmund Randolph Peaslee.

Dr. Edmund Randolph Peaslee died on January 21st, at the age of sixty-three years, of pneumonia, contracted by exposure resulting from unusually pressing professional engagements. He was born in Newton, N. H., was educated at Dartmouth College and graduated in 1836. He graduated from Yale Medical College in 1840. During the following year he began the practice of his profession at Hanover, N. H., and also commenced the delivery of a series of lectures on anatomy and physiology at Dartmouth College. He became a professor of those two branches in 1842, and continued to hold that chair until the year 1870. In the year 1843 he was appointed lecturer on anatomy and surgery at Bowdoin College, and was professor of these branches of

education during the period from 1845 to 1857, when he gave up anatomy, but continued to act as professor of surgery until 1860. Dr. Peaslee was appointed professor of physiology and general pathology, in the year 1851, at the New York Medical College, and from 1858 to 1860 he accepted the professorship of obstetrics in the same institution. He was elected professor of gynæcology at Dartmouth Medical College in 1872, and at Bellevue Hospital Medical College in 1874. He practiced seventeen years in Hanover, and subsequently in New York. He published a work on Human Histology, and also one one Ovariotomy. His distinguished services in his specialty and his skill as an ovariotomist are well known.—*Boston Medical and Surgical Journal.*

Medical News and Items.

RUSH MEDICAL COLLEGE.—The Thirty-fifth Annual Commencement exercises of this college were held in the Jefferson Park Presbyterian Church, February 26th, 1878. After prayer by the Rev. Francis L. Patton, D.D., President J. Adams Allen conferred the degrees upon 129 gentlemen who passed their examination to the satisfaction of the Faculty, out of the 141 who originally entered the graduating class. One honorary and four *ad eundem* degrees were also conferred—133 in all. The charge to the graduates by the President was followed by the response on behalf of the class by Dr. A. C. Cotton, after which Prof. Chas. T. Parkes delivered the Valedictory address. We regret our inability to overcome Dr. Parkes' modesty to secure his address for publication.

The following are the names of the graduating class:

Arnold, Edward Dudley; Alford, James Simpson; Anderson, Jeremiah Allen; Abrams, James Henry; Brattain, Benjamin Franklin; Baldwin, Aristides Edwin; Bowman, Andrew Washington; Burnham, Alonzo Festus; Burlingame, John Henderson; Boyd, Robert Dempsey; Browne, Alfred Marshman; Brown,

Commodore Perry; Bergen, George Matthews, A. B.; Burton, Daniel Francis, B.S.; Barry, John Samuel; Butz, John Edmund P.; Bennett, Edwin George; Brainerd, Henry Green; Burhans, Orvis Mann; Boardman, Edwin Orlando; Boganau, Sau; Bates, Frederick Herbert; Bellus, George Wesley; Bullard, Francis Bascom; Bond, Arthur Grant; Currens, John Randolph; Carlton, Lewis William; Cotton, Alfred Cleveland; Culver, Jacob; Craig, Augustus Lessure; Cram, Fred Warren; Christiancy, Victor Hugo; Camp, James Leeworthy, Jr.; Dawley, George; Darrow, Edward McLaren; Dinsdale, James, A.B.; Dewey, James J.; DePuy, Ozias; Demsey, Cyrus Felix; Daniels, William Nehemiah; Eldridge, Frank Paris; Ford, Lyman Washington; Forhan, Thomas Joseph; Furber, William Warren; Fieldhouse, James; Ferris, Charles Leonard, A.B.; Garrey, John Eugene; Godfrey, Byron Benjamin; Glennan, Michael Augustine; Goldspohn, Albert, B.S.; Hicks, Levi Nevada; Hobart, Jefferson Roger; Hall, William Edward; Hall, Joseph H.; Hurd, Herbert Halsey, A.B.; Hathaway, Lawrence Bryant; Hardman, Charles; Hinde, Alfred; Hayman, Lucius Henry; Hewitt, Henry Miller; Irwin, Judson Deforrest; Isherwood, Hortensus Lowry; Johnson, Austin H.; Kelly, Elijah Stephens; King, William Henry Kane; Kemper, Phillip Amiss; Logan, John Augustus; Long, Charles Melville; Murphy, John Redfield; Murphy, William Thomas; Morse, Ashbel Henry; McHugh, Uriah Clay; Miller, Samuel Ross; Mailer, Andrew Caldwell; McCoy, Hiram Foster; Miller, Samuel Borland; Metzradt, Hans Von; McClelland, Robert Alexander; Mills, Aaron; Major, Elverton E.; Nolan, Emanuel Cross; O'Conner, John Chrysler; Patterson, Fred William; Porter, Epaphroditus Jehoshaphat; Pratt, Howard Lewis; Pritchett, Gilbert Lafayette; Phillips, James Henry; Park, Henry Hull; Pettijohn, Abra Claudius; Porter, Dennis Wilson; Porter, Walter Howard; Quinn, Edward; Rathbun, Isaac Hale; Rathbun, Addison Milton; Rakenius, Hermann; Reed, Charles Corneau; Reid, Duncan, Ph. B.; Robinson, Andrew Jackson; Rogers, Talcott Austin; Reynolds, Emery Eugene; Ryon, George; Rounseville, Albert Parker; Sansom, Joseph Emmet; Sage, John B.; Sether, Christian; Shaw, James Emmet; Stretch, Ethan McAferty; Smolt, Charles

Frederic, B. S.; Stuart, George; Sexton, Albert Germain; Sherwin, Frank Oliver; Smith, William Lloyd; Salisbury, Jerome Henry, A. B.; Scott, James Edwin; Stiver, William Bike; Thayer, Carmi Casander, B.D.; Wilson, William Dean; Webb, Benjamin Oliver; Wheelwright, William Simmons; Wheeler, Edward Newby; Wear, Isaac Newton; Watson, Colin Christopher; Weens, Elwood; Woodbridge, Windsor Pelton; Wadhams, Frederick Eugene; Whitney, Eugene Wolcott; Wolfe, Albert Polk; Young, Vincent Phelps.

Ad Eundem.—Dr. John E. Owens, Dr. Norman Bridge, Dr. James Nevins Hyde, Dr. D. J. Loring.

Honorary.—Dr. John Burgess Walker.

THE WOMAN'S HOSPITAL MEDICAL COLLEGE OF CHICAGO.—The Eighth Annual Commencement Exercises of this institution took place at the Clark street M. E. Church on Thursday evening, February 28, 1878. After an overture by Maj. Nevans' orchestra the exercises were opened with prayer by the Rev. E. P. Goodwin, D. D. After which the Degree of Doctor in Medicine was conferred upon the following ladies by the President, Wm. H. Byford, A.M., M. D.: Ellenora Stallard, of Iowa; L. Anna Ballard, of Michigan; Helen B. Boddson, of Illinois; Clara Louisa Normington, of Illinois; Augusta Max Hyacinth, of Illinois; Nannie A. Stevens, of Illinois; Lida E. Green, of Illinois.

The Valedictory Address was then delivered by Prof. Wm. E. Quine, M. D. Subject, Courage.

A very fine audience was in attendance and the exercises passed off in an unusually pleasant manner, and were closed by the Benediction by the Rev. Dr. Goodwin.

On the following evening a very pleasant reception was given the class by Dr. and Mrs Byford, at their residence, 908 Indiana Av.

The Summer Course of Lectures will open on Tuesday, the 2d day of April, and continue till July 1st, '78.

CHICAGO MEDICAL COLLEGE.—The Nineteenth Annual Commencement exercises of this college were held in Plymouth Church (Michigan avenue, near 26th st.), on Tuesday, March 5, 1878. After prayer, the Dean of the College, Professor N. S. Davis, distributed certificates to undergraduates for hospital and dispensary

attendance, awarded the college prizes, and conferred the degree of Doctor of Medicine upon the gentlemen whose names are subjoined. Professor H. A. Johnson delivered the annual address to the graduates, and Dr. M. S. Wylie responded for the class. Music was furnished by the organist, Mr. I. V. Flagler, and the Philadelphia Quartette Club. The exercises were concluded with the benediction.

Geo. B. Abbott, J. D. Andrew, R. H. Babcock, John S. Beers, B. F. Boyer, R. H. Broe, Wm. H. Byford, Wm. W. Cook, J. W. Dal, John Enlow, Wm. M. Farr, J. H. Fellows, Albert Green, A. J. Irwin, L. A. Irwin, D. L. Kenyon, Wm. R. Lawrence, M. S. Marcy, Jos. Matteson, Wm. H. McClain, J. W. McKibbin, J. E. McNeil, Geo. W. Moody, E. E. Moore, F. Mueller, Niels J. Nielsen, Frederic L. Nutt, W. F. Nye, Edward Pearce, N. Pierpoint, C. B. Richmond, C. J. Rivenburgh, Milton M. Rowley, J. L. Sawyers, John Schwendener, Henry C. Sibree, W. H. Smith, Wm. T. Speaker, Horace M. Starkey, L. A. Stearns, Ora F. Thomas, Frank E. Waxham, E. H. Webster, G. N. Wood, P. M. Woodworth, H. M. Workman, Mac S. Wylie.

Honorary Degree.—Emanuel Ridgway.

Discreditable Pictures.—An illustrated paper is published at Hot Springs, Arkansas, designed to advertise certain hotels and regular (?) physicians. These latter favor the public with their counterfeit presentments, done in wood, and glowing tributes to their own powers. They are getting a well-merited scoring from the Western medical journals, and it is to be hoped their discipline will not end with that. Nothing could well be conceived more unbecoming and discreditable.—*Phila. Med. and Surg. Reporter.*

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, April 1 and 15.

Chicago Society of Physicians and Surgeons—Mondays, April 8 and 22.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 to 4 p. m., by Prof. Holmes and Dr. Hotz—2 p. m., Prof. Jones.

Mercy Hospital—2 to 3 p. m. Surgical, by Prof. Andrews.

Rush Medical College—1:30 p. m. Medical, by Dr. Bridge; 2:30 p. m. Dermatological and Venereal, by Dr. Hyde.

County Hospital—8 p. m. Necropsy, by Dr. Danforth.

Woman's Medical College—3 p. m. Surgical, by Prof. Owens.

TUESDAY.

County Hospital—1:30 p. m. Medical, by Prof. Lyman; 2:30 p. m. Surgical, by Prof. Parkes.

Mercy Hospital—2 p. m. Medical, by Prof. Hollister.

Eye and Ear Infirmary—2 p. m. Prof. Jones.

WEDNESDAY.

County Hospital—1:30 p. m. Ophthalmological, by Dr. Montgomery. 2:30 p. m. Gynecological, by Dr. Bridge.

Mercy Hospital—2 p. m. Eye and Ear, by Prof. Jones.

Rush Medical College—4 p. m. Diseases of the Chest, by Prof. Ross.

THURSDAY.

Mercy Hospital—2 p. m. Medical, by Prof. Davis.

Rush Medical College—1:30 p. m. Neurological, by Prof. Lyman.

Eye and Ear Infirmary—2 to 4 p. m. Operations by Prof. Holmes and Dr. Hotz.

FRIDAY.

Mercy Hospital—2 p. m. Medical, by Prof. Davis.

County Hospital—1:30 p. m. Medical, by Prof. Quine; 2:30 p. m., Surgical, by Prof. Powell.

Woman's Medical College—10 p. m. Ophthalmological, by Dr. Montgomery.

SATURDAY.

Rush Medical College—2 p. m. Surgical, Prof. Gunn.

Chicago Medical College—2 p. m. Surgical, by Prof. Andrews and Isham; 3 p. m., Diseases of the Chest, by Prof. Johnson.

Woman's Medical College—12 m. Gynecological, by Prof. Fitch; 3 p. m. Dermatological, Dr. Maynard.

Special Clinics daily, from 2 to 4 p. m., at the South Side Dispensary, and at the Central Free Dispensary.

For schedule of lectures at the colleges, apply to the college janitors.